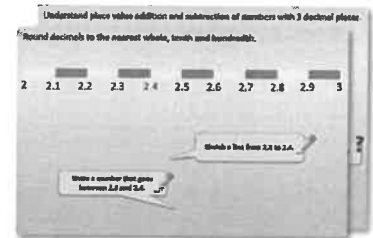


# Year 4: Week 2, Day 1

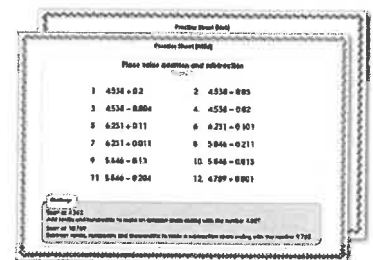
## Adding three or four numbers

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the Learning Reminders. They come from our *PowerPoint* slides.



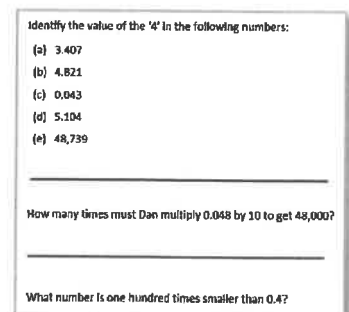
2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?



4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!



## Learning Reminders

Add three 2-digit numbers using column addition.

We can add three 2-digit numbers using expanded addition.

Let's try  
 $56 + 37 + 28$ .

First partition the numbers and set out neatly. Leave a space under the last number...

$$\begin{array}{r} 50 \ 6 \\ 30 \ 7 \\ + 20 \ 8 \\ \hline 120 \ 1 \end{array}$$

Add the 1s.  $6 + 7 + 8 = ?$

Put the 20 on the waiting line under the 10s and 1 in the answer line under the 1s.

Add the 10s.  $50 + 30 + 20 = ?$

Finally recombine,  $120 + 1 =$

$$120 + 1 = 121$$

## Learning Reminders

Add three 2-digit numbers using column addition.

Let's compare that with  
the compact method...

$$\begin{array}{r} 50\ 6 \\ 30\ 7 \\ + 20\ 8 \\ \hline 120\ 1 \end{array}$$

$$120 + 1 = 121$$

$$\begin{array}{r} 56 \\ 37 \\ + 28 \\ 2 \\ \hline 121 \end{array}$$

## Learning Reminders

Add four 2-digit numbers using compact addition.

Now we're going to add four 2-digit numbers using the compact method.

Let's try  $72 + 46 + 25 + 53$ . Will the answer be more than 100? More than 200?

Add the 1s.  $2 + 6 + 5 + 3 = ?$

Where do we write the 1 and the 6 in 16?

Add the 10s.  $70 + 40 + 20 + 50 + 10 = ?$

$$\begin{array}{r} 72 \\ 46 \\ 25 \\ + 53 \\ 1 \\ \hline 196 \end{array}$$

## Practice Sheet Mild

### Adding three numbers

#### Part 1

Use expanded addition to solve these additions:

$$12 + 13 + 22$$

$$20 + 16 + 24$$

$$32 + 14 + 27$$

$$27 + 21 + 34$$

$$36 + 33 + 24$$

$$55 + 44 + 32$$

#### Part 2

Use compact addition to solve these additions:

$$21 + 42 + 34$$

$$32 + 47 + 46$$

$$34 + 25 + 42$$

$$46 + 51 + 28$$

$$51 + 62 + 45$$

$$67 + 72 + 39$$

$$48 + 46 + 53$$

$$74 + 63 + 86$$

#### Part 3

Choose three cards. Add the numbers.

Do this six times. You must do a different addition each time!

47

66

58

45

74

#### Challenge

I added three consecutive numbers with a total of 222. What were the numbers?

## Practice Sheet Hot

### Adding four numbers

#### Part 1

Use expanded or compact addition to solve these additions:

$11 + 23 + 12 + 31$	$35 + 21 + 14 + 32$
$24 + 15 + 23 + 11$	$41 + 10 + 22 + 53$
$32 + 61 + 45 + 56$	$58 + 72 + 63 + 64$

#### Part 2

Use compact addition to solve these additions:

$62 + 75 + 84 + 53$	$76 + 71 + 27 + 82$
$83 + 81 + 94 + 37$	$95 + 12 + 60 + 76$
$84 + 72 + 85 + 96$	$98 + 89 + 78 + 97$

#### Part 3

A palindrome reads the same backwards as forwards, e.g. the words: mum, level or madam. Palindromic numbers do the same, e.g. 4114 or 55 or 727.

Add four 2-digit numbers to give each of these palindromic answers:

202

191

333

252

#### Challenge

What is the largest possible palindromic total you can find by adding four 2-digit numbers?

# Practice Sheet Answers

## Adding three numbers (mild)

### Part 1

Use expanded addition to solve these additions:

$$12 + 13 + 22 = 47$$

$$20 + 16 + 24 = 60$$

$$32 + 14 + 27 = 73$$

$$27 + 21 + 34 = 82$$

$$36 + 33 + 24 = 93$$

$$55 + 44 + 32 = 131$$

### Part 2

Use compact addition to solve these additions:

$$21 + 42 + 34 = 97$$

$$32 + 47 + 46 = 125$$

$$34 + 25 + 42 = 101$$

$$46 + 51 + 28 = 125$$

$$51 + 62 + 45 = 158$$

$$67 + 72 + 39 = 178$$

$$48 + 46 + 53 = 147$$

$$74 + 63 + 86 = 223$$

### Part 3

Choose three cards. Add the numbers.

Do this six times. You must do different addition each time!

$$47 + 66 + 58 = 171$$

$$66 + 58 + 45 = 169$$

$$47 + 66 + 45 = 158$$

$$66 + 58 + 74 = 198$$

$$47 + 66 + 74 = 187$$

$$66 + 45 + 74 = 185$$

$$47 + 58 + 45 = 150$$

$$58 + 45 + 74 = 177$$

$$47 + 58 + 74 = 179$$

$$47 + 45 + 74 = 166$$

### Challenge

The numbers were:

$$73 + 74 + 75 = 222$$

## Adding four numbers (hot)

### Part 1

Use expanded or compact addition to solve these additions:

$$11 + 23 + 12 + 31 = 77$$

$$35 + 21 + 14 + 32 = 102$$

$$24 + 15 + 23 + 11 = 73$$

$$41 + 10 + 22 + 53 = 126$$

$$32 + 61 + 45 + 56 = 194$$

$$58 + 72 + 63 + 64 = 257$$

### Part 2

Use compact addition to solve these additions:

$$62 + 75 + 84 + 53 = 274$$

$$76 + 71 + 27 + 82 = 256$$

$$83 + 81 + 94 + 37 = 295$$

$$95 + 12 + 60 + 76 = 243$$

$$84 + 72 + 85 + 96 = 337$$

$$98 + 89 + 78 + 97 = 362$$

### Part 3

Examples include:

$$202 = 48 + 17 + 83 + 54$$

$$191 = 23 + 38 + 69 + 61$$

$$333 = 81 + 82 + 83 + 87$$

$$252 = 49 + 74 + 83 + 46$$

### Challenge

393 is the largest possible answer, e.g.  $99 + 99 + 98 + 97$

**A Bit Stuck?**  
**Do the splits**

**Work in pairs**

### Things you will need:

- A set of 100s, 10s and 1s place value cards
- A pencil



### What to do:

- Shuffle the 100 to 500 cards and place face down in a pile.  
Shuffle the 10 to 50 cards and place face down.  
Shuffle the 1 to 9 cards and place face down.
- Take the top two cards from each pile and put them together to make a pair of 3-digit numbers.
- Collect the 100s, 10s and 1s. Find the combined total. Record the addition.
- Repeat at least two more times.
- Repeat, but this time use the 100 to 500 cards, 10 to 90 cards and 1 to 5 cards.

$$453 + 238 =$$
  
$$600 + 80 + 11 = 691$$

***S-t-r-e-t-c-h:***

**Try using the 100 to 500 cards, 10 to 90 cards and 1 to 9 cards.**

**Learning outcomes:**

- I can use partitioning to add pairs of 3-digit numbers (answers  $< 1000$ ,  $10\text{s} < 100$ ,  $1\text{s} < 10$ ).
- I am beginning to use partitioning to add pairs of 3-digit numbers (answers  $< 1000$ ,  $10\text{s} > 100$  or  $1\text{s} > 10$ ).





# Place Value Cards (sheet 1)



1 0 0

6 0 0

2 0 0

7 0 0

3 0 0

8 0 0

4 0 0

9 0 0

5 0 0



## Place Value Cards (sheet 2)

1 0

6 0

1

2 0

7 0

2

3 0

8 0

3

4 0

9 0

4

5 0

5

## Place Value Cards (sheet 3)

6

7

8

9

## Check your understanding

### Questions

True or false?

- Adding three 2-digit numbers always produces a number over 50.
  - Adding three 2-digit numbers cannot produce 299.
  - There are three identical numbers which add to 252.
- 

Choose three consecutive numbers, e.g. 39, 40 and 41.

Add them.

Repeat twice with different sets of consecutive numbers.

Can you see any relationship between the total in each case and the numbers added?

Simplify the numbers if it's hard to spot a pattern.

Use a calculator to play with the numbers if necessary...

Does this work with all sets of three consecutive numbers, regardless of their size? Can you explain why?

Fold here to hide your answers

---

## Check your understanding

### Answers

True or false?

- Adding three 2-digit numbers always produces a number over 50. False – e.g. 12, 14 and 23 which total 49. Children should be able to give their own similar counter-examples.
  - Adding three 2-digit numbers cannot produce 299. True, since the largest 2-digit number is 99 and  $99 + 99 + 99 = 297$ .
  - There are three identical numbers which add to 252. True – since the digit sum of 252 is 9, it must be divisible by 3. Children may solve this by trial and improvement and find  $84 + 84 + 84 = 252$ .
- 

Choose three consecutive numbers, e.g. 39, 40 and 41.

Add them. 120.

Repeat twice with different sets of consecutive numbers.

Can you see any relationship between the total in each case and the numbers added?

Simplify the numbers if it's hard to spot a pattern.

Use a calculator to play with the numbers if necessary...

Does this work with all sets of three consecutive numbers, regardless of their size? Can you explain why?

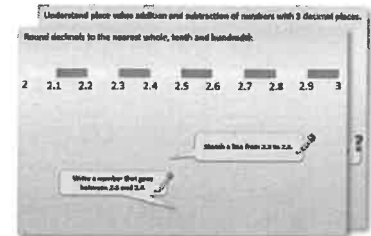
The total is always 3 times the middle number of the three; this is because one of the numbers is *one less* and one is *one more* than the middle one.

# Year 4: Week 2, Day 2

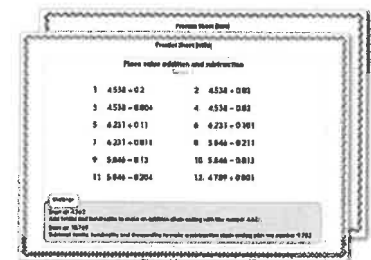
## Adding money

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the Learning Reminders. They come from our *PowerPoint* slides.



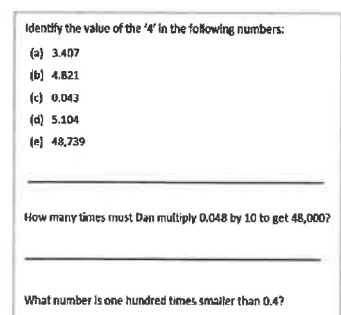
2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?



4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!



## Learning Reminders

Add amounts of money using expanded addition.

We can use expanded addition to add £3.24 and £2.58.

Partition the amounts into £s, 10ps and 1ps. Line the columns up neatly and don't forget a blank 'waiting line' under the second number.

Add the 1ps.  $4p + 8p = 12p$ .  
We put 10p under the 10ps in the waiting line and 2p under the 1ps in the answer line.

Next add the 10ps.  
 $20p + 50p + 10p = ?$

Then the £s.  
 $£3 + £2 = ?$

Finally recombine the pounds and pence.

£3	20p	4p
+	£2	50p
		8p
		<u>10p</u>
£5	80p	2p

$$£5 + 80p + 2p = £5.82$$

## Learning Reminders

Add **amounts** of money using expanded and compact addition.

Try adding 324 and 258 using compact addition.

$$\begin{array}{r} 324 \\ + 258 \\ \hline 582 \end{array}$$

Let's check through that...

1s  
10s  
100s

$$\begin{array}{r} £3.24 \\ + £2.58 \\ \hline £5.82 \end{array}$$

We can add £3.24 and £2.58 in the same way, without partitioning the amounts...!

## Learning Reminders

Add amounts of money using compact addition.

Work out  $374 + 283$  using compact addition.

Let's check through...

What happened when we added 70 and 80?

$$\begin{array}{r} 374 \\ + 283 \\ \hline 657 \end{array}$$

$$\begin{array}{r} \text{£}3.74 \\ + \text{£}2.83 \\ \hline \text{£}6.57 \end{array}$$

We can add  $\text{£}3.74$  and  $\text{£}2.83$  in the same way.

The 70p and 80p make  $\text{£}1.50$ . 5 goes under the 10ps and the  $\text{£}1$  under the pounds.



## Practice Sheet Mild

### Missing number additions

Fill in the missing numbers:

$$\begin{array}{r} 1. \quad \text{£}1.00 \quad 20\text{p} \quad \square \\ + \text{£}2.00 \quad 30\text{p} \quad \square \\ \hline \text{£}3.00 \quad \square \quad 8\text{p} \end{array}$$

$$\begin{array}{r} 2. \quad \text{£}3.00 \quad \square \quad 5\text{p} \\ + \text{£}2.00 \quad \square \quad 1\text{p} \\ \hline \text{£}5.00 \quad 20\text{p} \quad \square \end{array}$$

$$\begin{array}{r} 3. \quad \text{£}1.00 \quad 20\text{p} \quad \square \\ + \text{£}3.00 \quad 20\text{p} \quad \square \\ \hline \text{£}4.00 \quad \square \quad 7\text{p} \end{array}$$

$$\begin{array}{r} 4. \quad \text{£}3.00 \quad 20\text{p} \quad \square \\ + \text{£}1.00 \quad 50\text{p} \quad \square \\ \quad 10\text{p} \\ \hline \text{£}4.00 \quad \square \quad 1\text{p} \end{array}$$

$$\begin{array}{r} 5. \quad \text{£}3.\square 2 \\ + \text{£}2.\square 6 \\ \quad 1 \\ \hline \text{£}6. 2\square \end{array}$$

$$\begin{array}{r} 6. \quad \text{£}4. 3 \square \\ + \text{£}2. 2 \square \\ \quad 1 \\ \hline \text{£}6.\square\square \end{array}$$

$$\begin{array}{r} 7. \quad \text{£}3.\square 5 \\ + \text{£}2.\square 1 \\ \quad 1 \\ \hline \text{£}6. 3\square \end{array}$$

$$\begin{array}{r} 8. \quad \text{£}4. 1 \square \\ + \text{£}3. 2 \square \\ \quad 1 \\ \hline \text{£}7.\square 4 \end{array}$$

$$\begin{array}{r} 9. \quad \text{£}4.\square 1 \\ + \text{£}1.\square 4 \\ \quad 1 \\ \hline \text{£}6. 1\square \end{array}$$

### Challenge

Choose three amounts and add them. Repeat this twice.

What is the largest total possible? And the smallest? How close can you get to £90?

£14.76   £27.76   £56.92  
£25.38   £30.55

## Practice Sheet (hot)

### Adding money

#### Part 1

Use expanded or compact addition to answer these additions:

$$452 + 583$$

$$£4.52 + £5.83$$

$$465 + 387$$

$$£4.65 + £3.87$$

$$368 + 457$$

$$£3.68 + £4.57$$

#### Part 2

Use expanded addition and then compact addition to answer these additions:

$$£6.54 + £3.65$$

$$£2.81 + £6.65$$

$$£5.48 + £4.78$$

#### Part 3

Use compact addition to answer these additions:

$$£4.75 + £1.82 + £2.37$$

$$£7.42 + £7.56 + £8.54$$

$$£8.57 + £6.79 + £1.65$$

#### Challenge

Write 2 amounts that add to exactly £12.34.

**BUT** the 1ps must add to more than 10p and the 10ps must add to more than £1.

#### Further challenge

Write three amounts that add to exactly £12.34 – same rules as above!

## Practice Sheet Answers

### Missing number additions (mild)

(for some other correct answers are possible, these are examples)

$$\begin{array}{r} 1. \quad \text{£1.00 } 20\text{p } 4\text{p} \\ + \text{£2.00 } 30\text{p } 4\text{p} \\ \hline \end{array}$$

$$\text{£3.00 } 50\text{p } 8\text{p}$$

$$\begin{array}{r} 2. \quad \text{£3.00 } 10\text{p } 5\text{p} \\ + \text{£2.00 } 10\text{p } 1\text{p} \\ \hline \end{array}$$

$$\text{£5.00 } 20\text{p } 6\text{p}$$

$$\begin{array}{r} 3. \quad \text{£1.00 } 20\text{p } 4\text{p} \\ + \text{£3.00 } 20\text{p } 3\text{p} \\ \hline \end{array}$$

$$\text{£4.00 } 40\text{p } 7\text{p}$$

$$\begin{array}{r} 4. \quad \text{£3.00 } 20\text{p } 9\text{p} \\ + \text{£1.00 } 50\text{p } 2\text{p} \\ \hline \end{array}$$

$$\begin{array}{r} 10\text{p} \\ \hline \text{£4.00 } 80\text{p } 1\text{p} \end{array}$$

$$\begin{array}{r} 5. \quad \text{£3.82} \\ + \text{£2.46} \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ \hline \text{£6.28} \end{array}$$

$$\begin{array}{r} 6. \quad \text{£4.37} \\ + \text{£2.28} \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ \hline \text{£6.65} \end{array}$$

$$\begin{array}{r} 7. \quad \text{£3.95} \\ + \text{£2.41} \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ \hline \text{£6.36} \end{array}$$

$$\begin{array}{r} 8. \quad \text{£4.18} \\ + \text{£3.26} \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ \hline \text{£7.44} \end{array}$$

$$\begin{array}{r} 9. \quad \text{£4.21} \\ + \text{£1.94} \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ \hline \text{£6.15} \end{array}$$

### Challenge

$$\text{£56.92} + \text{£30.55} + \text{£27.76} = \text{£115.23 (largest)}$$

$$\text{£14.76} + \text{£25.38} + \text{£27.76} = \text{£67.90 (smallest)}$$

$$\text{Closest total to £90 is £83.69 (£27.76} + \text{£25.38} + \text{£30.55)}$$

### Adding money (hot)

#### Part 1

$$452 + 583 = 1035$$

$$465 + 387 = 852$$

$$368 + 457 = 825$$

$$\text{£4.52} + \text{£5.83} = \text{£10.35}$$

$$\text{£4.65} + \text{£3.87} = \text{£8.52}$$

$$\text{£3.68} + \text{£4.57} = \text{£8.25}$$

#### Part 2

$$\text{£6.54} + \text{£3.65} = \text{£10.19}$$

$$\text{£2.81} + \text{£6.65} = \text{£9.46}$$

$$\text{£5.48} + \text{£4.78} = \text{£10.26}$$

#### Part 3

$$\text{£4.75} + \text{£1.82} + \text{£2.37} = \text{£8.94}$$

$$\text{£7.42} + \text{£7.56} + \text{£8.54} = \text{£23.52}$$

$$\text{£8.57} + \text{£6.79} + \text{£1.65} = \text{£17.01}$$

### Challenge

$$\text{£1.66} + \text{£10.68} = \text{£12.34}$$

$$\text{£1.77} + \text{£10.57} = \text{£12.34}$$

$$\text{£1.88} + \text{£10.46} = \text{£12.34}$$

$$\text{£1.99} + \text{£10.35} = \text{£12.34}$$

$$\text{£1.67} + \text{£10.67} = \text{£12.34}$$

$$\text{£1.68} + \text{£10.66} = \text{£12.34}$$

$$\text{£1.69} + \text{£10.65} = \text{£12.34}$$

$$\text{£1.78} + \text{£10.56} = \text{£12.34}$$

$$\text{£1.79} + \text{£10.55} = \text{£12.34}$$

These are examples, other correct answers are possible. Check addition adds up to £12.34.

## A Bit Stuck? Pocket money

*Work in pairs*

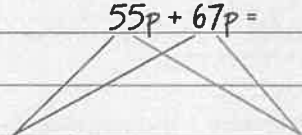
Things you will need:

- 10p and 1p coins
- A pencil



**What to do:**

- Take it in turns to choose two items from the website page.
- Find the total. You can use 10p and 1p coins, or draw a jotting to help you.
- Write the total cost in pounds.
- Score 10 points if the total is more than £1.50.

55p and 67p
$55p + 67p =$

$110p + 12p = 122p$
$\pounds 1.22$

**S-t-r-e-t-c-h:**

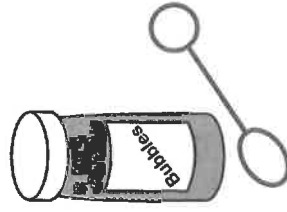
Choose three items and find the total cost.

**Learning outcomes:**

- I can add pairs of 2-digit prices, using partitioning (answer greater than £1).
- I can write amounts between 100p and 200p in pounds.
- I am beginning to add three 2-digit prices.

## Pocket Money

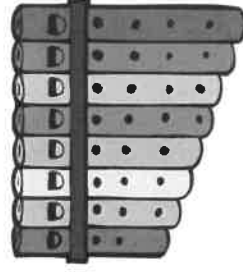
Have fun spending your pocket money here - find a great range of toys and accessories at affordable prices.



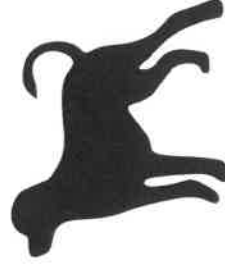
Multi-coloured bubbles  
**55p**

[Add to basket](#)

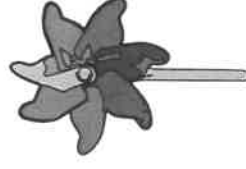

Fast spin yo-yo  
**67p**

[Add to basket](#)


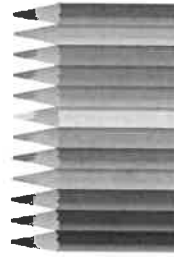
Mini pan pipes  
**72p**

[Add to basket](#)


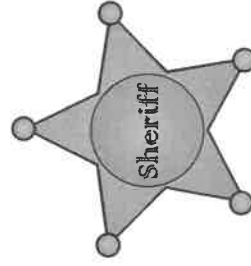
Stretchy dog  
**85p**

[Add to basket](#)


Windmill  
**58p**

[Add to basket](#)


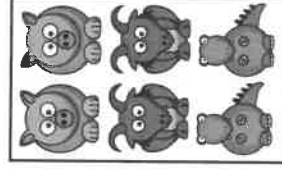
Mini pencil pack  
**63p**

[Add to basket](#)


Sheriff's badge  
**76p**

[Add to basket](#)


Tiger note pad  
**92p**

[Add to basket](#)


Stickers  
**88p**

[Add to basket](#)


Colouring book  
**96p**

[Add to basket](#)

## Check your understanding

### Questions

Complete these additions using expanded column addition.

I.  $£5.78 + £4.22$

II.  $£2.56 + £7.44$

III.  $£3.17 + £6.83$

Did you notice a pattern?

Can you write two more additions like this?

---

Is a column addition calculation the most efficient way to find:

$£4.99 + £7.46$

$£8.06 + £8.06$

$£4.31 + £5.69$

---

Write the missing numbers in this calculation:

£	10p	1p
4	<input type="text"/>	7
+ 5	6	<input type="text"/>

---

<input type="text"/>	4	5
----------------------	---	---

---

If £3.47 is subtracted from a number to leave £3.85, what was the number?

---

---

## Check your understanding

### Answers

Complete these additions using expanded column addition.

(i)  $£5.78 + £4.22 = £10.$

(ii)  $£2.56 + £7.44 = £10$

(iii)  $£3.17 + £6.83 = £10$

Did you notice a pattern? All three additions total £10.

Can you write two more additions like this? Check children's examples. Can they articulate that the 1ps column always adds to 10p, the 10ps add to 90p and the £1s add to £9 (before moving amounts across columns)?

Is a column addition calculation the most efficient way to find:

$£4.99 + £7.46 = £12.45$ . Add £5 to £7.46 and subtract 1p.

$£8.06 + £8.06 = £16.12$ . Double each of the £s and ps.

$£4.31 + £5.69 = £10$ . 31 and 69 are complements to 100, add that (as £1) to £4 and £5.

Write the missing numbers in this calculation:

£	10p	1p
4	7	7
+ 5	6	8
_ 1	1	
10	4	5

Note the 1s in the waiting line

If £3.47 is subtracted from a number to leave £3.85, what was the number? £7.32. Watch for children who have subtracted £3.47 from £3.85 (38p) – a bar model can help clarify that the answer is found by adding the 2 amounts:

?	
£3.47	£3.85



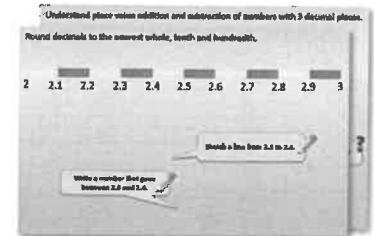


# Year 4: Week 2, Day 3

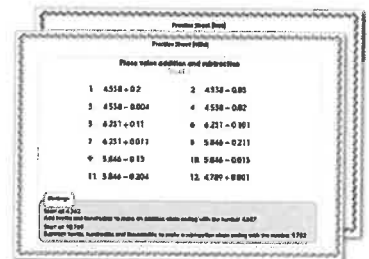
## Finding change

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the Learning Reminders. They come from our *PowerPoint* slides.



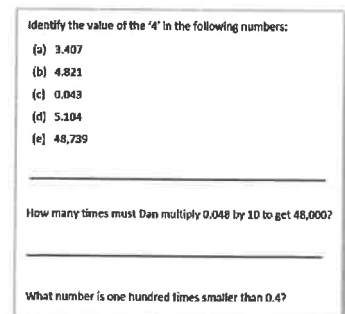
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild (easier)** or **Hot (harder)**! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**

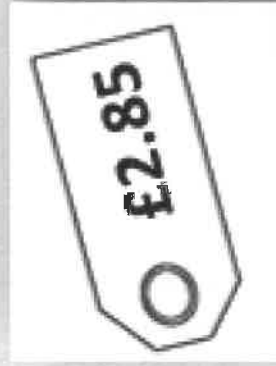


4. Have I mastered the topic? A few questions to **Check your understanding**. Fold the page to hide the answers!



## Learning Reminders

Count up to find change from £5.



If you have £5 to spend  
and an item costs  
£2.85, how could you  
calculate the change?

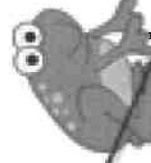
Draw a line and  
mark £2.85 on  
the left and £5  
on the right...

Frog knows that 85  
+ 15 = 100 so he  
jumps 15p to £3...

... and then £2  
to £5.

£2

15p



£2.85

£3

£5

So you would get  
£2.15 change from £5.

## Learning Reminders

Count up to find change from £10.

This time you have  
£10 and the item  
costs £5.48.

Draw a line and mark  
£5.48 on the left and  
£10 on the right...

Frog's ready to  
go!

How far to the  
next pound?

How much **more** to  
£10?

How **much** change  
this time?

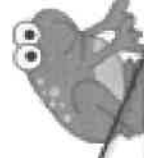
52p

£4

£5.48

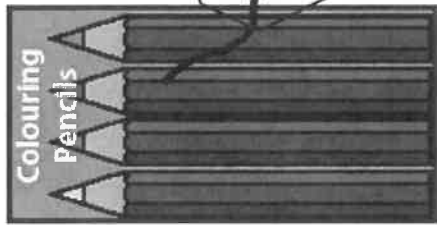
£6

£10

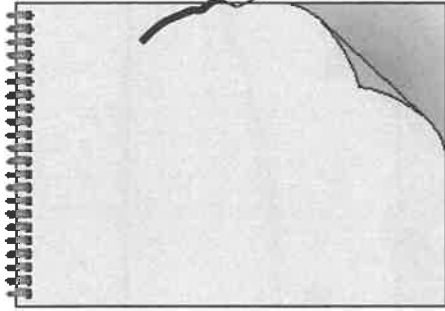


## Practice Sheet Mild

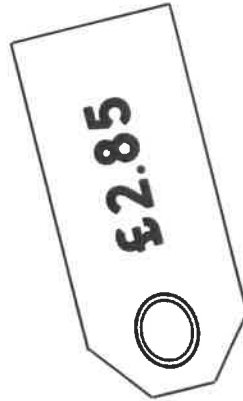
### Finding change



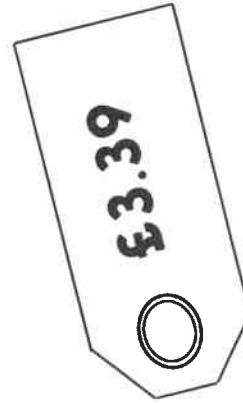
£3.79



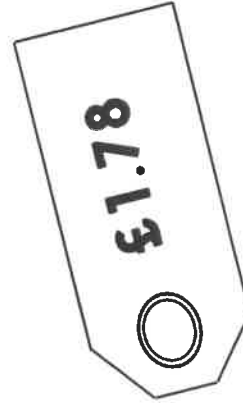
£2.68



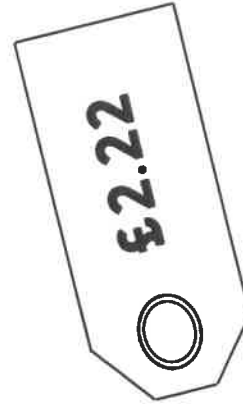
£2.85



£3.39



£1.78



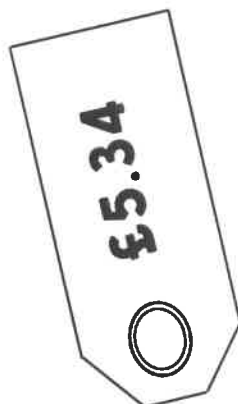
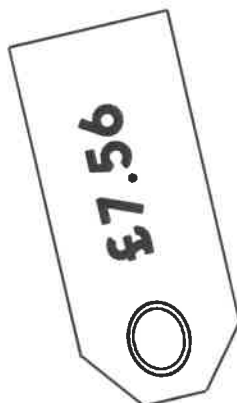
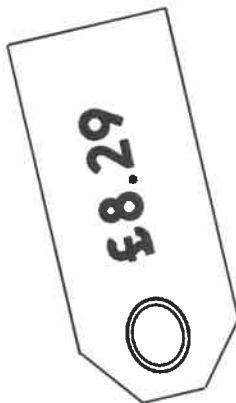
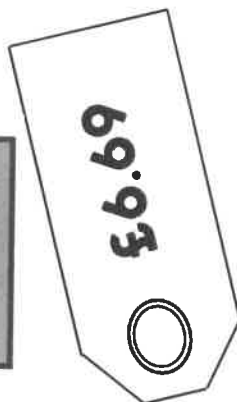
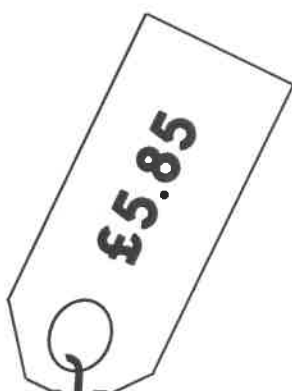
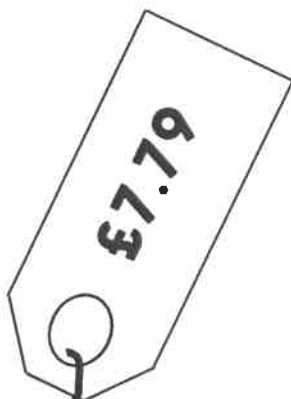
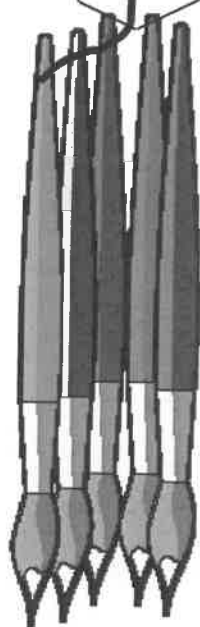
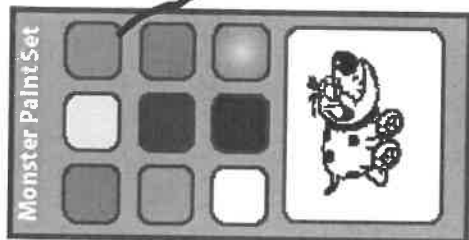
£2.22

Find the change from £5 for each of these six prices.

#### Challenge

I spend £2.42. Do I have enough money left to buy a notebook?

## Practice Sheet Hot Finding change



Find the change from £10 for each of these six prices.

### Challenge

I use a £20 note and buy an item for £10.13. My change is £9.87 which has consecutive digits 9, 8, 7. Can you find other prices where my change from £20 would be a number with consecutive digits?

## Practice Sheet Answers

### Finding change (mild)

Colouring pencils:  $\pounds 5.00 - \pounds 3.79 = \pounds 1.21$

Pad of paper:  $\pounds 5.00 - \pounds 2.68 = \pounds 2.32$

Ticket 1:  $\pounds 5.00 - \pounds 2.85 = \pounds 2.15$

Ticket 2:  $\pounds 5.00 - \pounds 3.39 = \pounds 1.61$

Ticket 3:  $\pounds 5.00 - \pounds 1.78 = \pounds 3.22$

Ticket 4:  $\pounds 5.00 - \pounds 2.22 = \pounds 2.78$

### Challenge

No. Spending  $\pounds 2.42$  only leaves you  $\pounds 2.58$ , which is not enough for a notebook that costs  $\pounds 2.68$ .

### Finding change (hot)

Paint set:  $\pounds 10.00 - \pounds 7.79 = \pounds 2.21$

Brushes:  $\pounds 10.00 - \pounds 5.85 = \pounds 4.15$

Ticket 1:  $\pounds 10.00 - \pounds 6.69 = \pounds 3.31$

Ticket 2:  $\pounds 10.00 - \pounds 8.29 = \pounds 1.71$

Ticket 3:  $\pounds 10.00 - \pounds 7.56 = \pounds 2.44$

Ticket 4:  $\pounds 10.00 - \pounds 5.34 = \pounds 4.66$

### Challenge

$\pounds 20 - \pounds 18.77 = \pounds 1.23$

$\pounds 20 - \pounds 15.44 = \pounds 4.56$

$\pounds 20 - \pounds 12.11 = \pounds 7.89$

$\pounds 20 - \pounds 14.57 = \pounds 5.43$

$\pounds 20 - \pounds 11.24 = \pounds 8.76$

$\pounds 20 - \pounds 7.66 = \pounds 12.34$

$\pounds 20 - \pounds 17.66 = \pounds 2.34$

$\pounds 20 - \pounds 14.33 = \pounds 5.67$

$\pounds 20 - \pounds 16.79 = \pounds 3.21$

$\pounds 20 - \pounds 13.46 = \pounds 6.54$

$\pounds 20 - \pounds 10.13 = \pounds 9.87$

$\pounds 20 - \pounds 16.55 = \pounds 3.45$

$\pounds 20 - \pounds 13.22 = \pounds 6.78$

$\pounds 20 - \pounds 15.68 = \pounds 4.32$

$\pounds 20 - \pounds 12.35 = \pounds 7.65$

$\pounds 20 - \pounds 17.90 = \pounds 2.10$

## A Bit Stuck? Winter warmers

Work in pairs

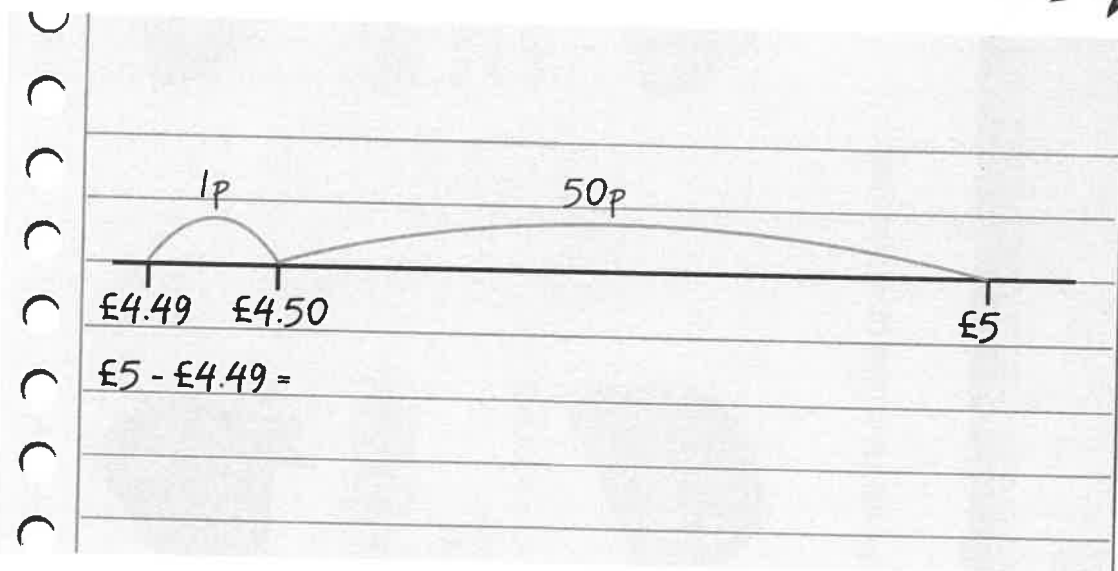
Things you will need:

- A pencil



What to do:

- Take it in turns to choose a hat or a beanie from the web page.
- Use Frog to find the change from £5.
- How many hats can you buy before you run out of time?



**S-t-r-e-t-c-h:**

Choose two hats and find the change from £10.

Learning outcomes:

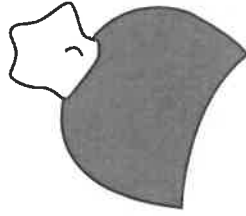
- I can use Frog to find the change from £5 (answers less than £1).
- I am beginning to use Frog to find the change from £10.

# Hamilton Education go outdoors

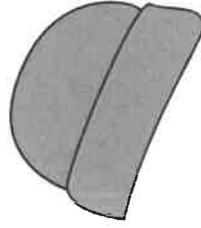
[Your account](#)[Your basket](#)[Men's](#)[Women's](#)[Kid's](#)[Walking](#)[Running](#)[Climbing](#)[Camping](#)

## Winter hats

Wrap up and keep warm this winter with our latest range of winter hats.



Red pom-pom beanie  
**£4.49**

[Add to basket](#)

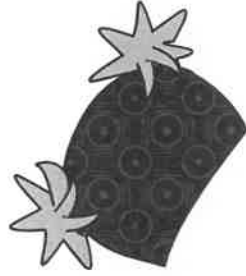
Orange plain knit beanie  
**£4.85**

[Add to basket](#)

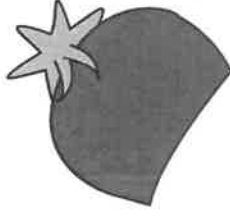
Khaki Aran knit beanie  
**£4.63**

[Add to basket](#)

Purple zig-zag striped beanie  
**£4.75**

[Add to basket](#)

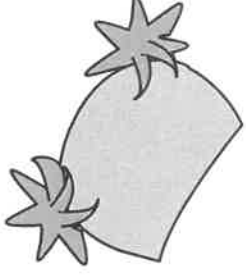
Techno pattern double pom-pom beanie  
**£4.25**

[Add to basket](#)

Grey pom-pom beanie  
**£4.37**

[Add to basket](#)

Aztec knit beanie  
**£4.59**

[Add to basket](#)

Pale blue fluffy pom-pom beanie  
**£4.46**

[Add to basket](#)



## Check your understanding Questions

Tim buys a DVD. Frog finds the change from £10, saying it is £3.46. How much was the DVD?

Complete each diagram.

£10	
£6.83	

£5	
	£2.27

£10	
£3.58	

Fold here to hide answers

## Check your understanding Answers

Tim buys a DVD. Frog finds the change from £10, saying it is £3.46. How much was the DVD? £6.54.  
Frog jumps 4p, 50p and £6 from £3.46 – some may be able to use complements to 100 and combine the first 2 jumps.

Complete each diagram.

£10	
£6.83	£3.17

£5	
£2.73	£2.27

£10	
£3.58	£6.42

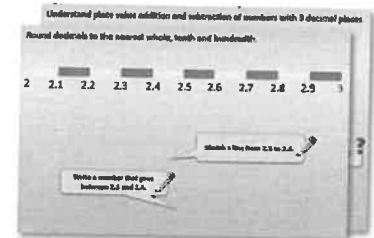


# Year 4: Week 2, Day 4

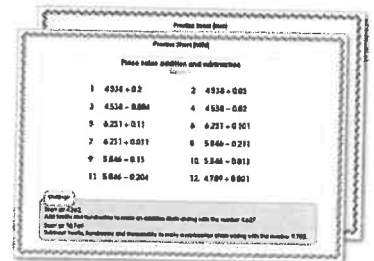
## Subtraction using Frog

Each day covers one maths topic. It should take you about 1 hour or just a little more.

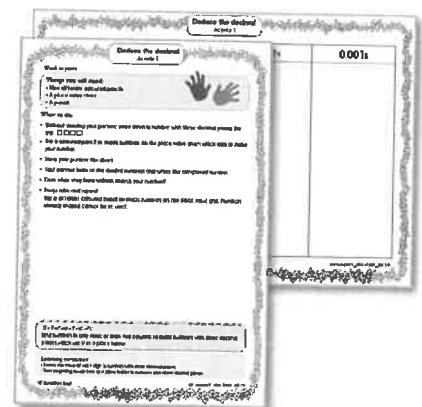
1. Start by reading through the Learning Reminders. They come from our *PowerPoint* slides.



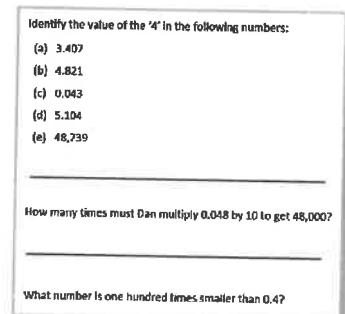
2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?



4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!



## Learning Reminders

Count up to solve 3-digit subtractions.

Let's work out  $524 - 378$   
using Frog.

First we draw a number line  
and mark on 378 and 524...

Frog starts on  
378. How far to  
the next 100?

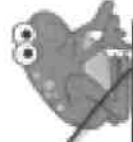
How far to 500?

How far to 524?

22

100

24



378

400

500

524

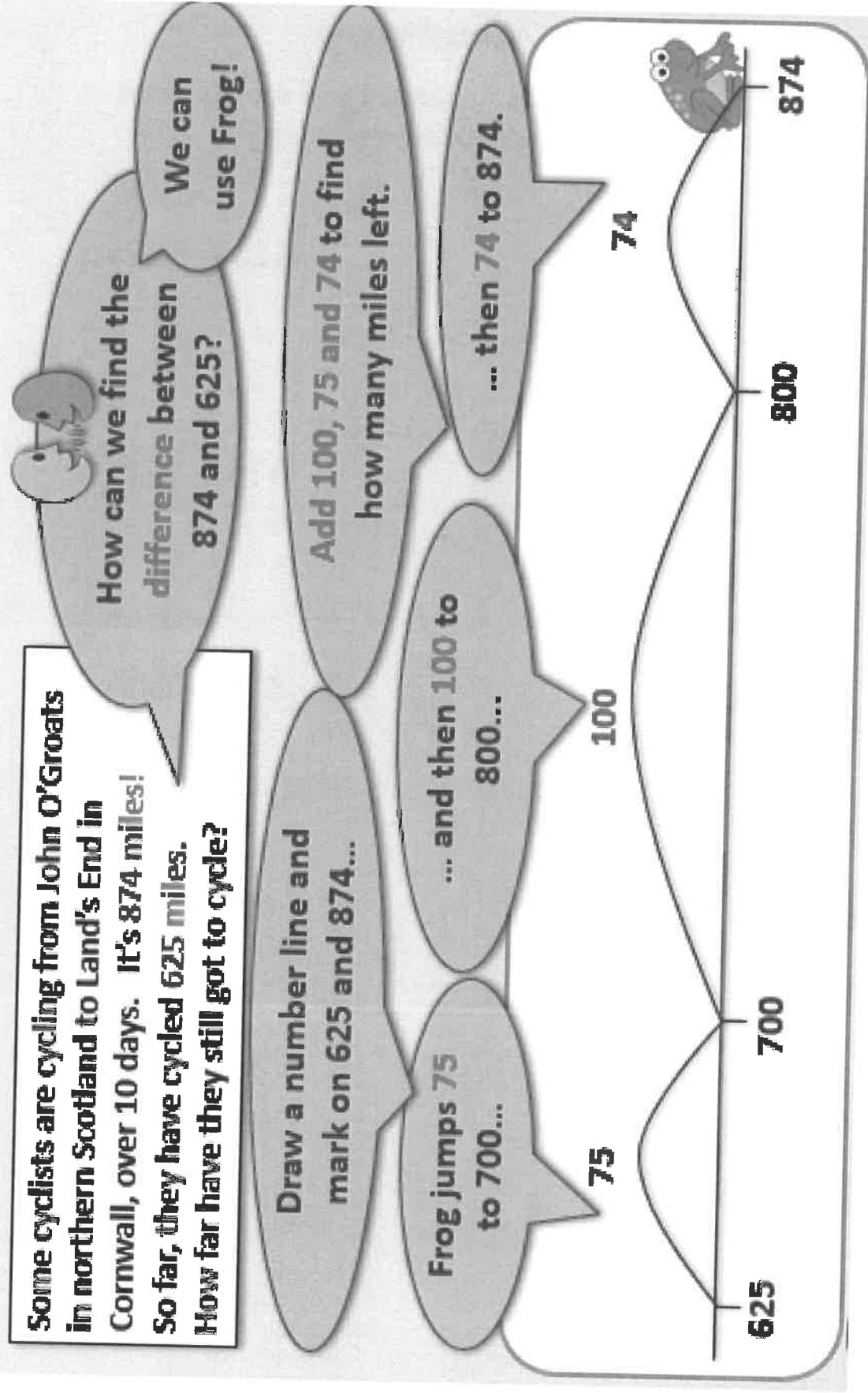
Now we add the jumps.  
 $100 + 22 + 24 = ?$

$524 - 378 = ?$

## Learning Reminders

Count up to solve 3-digit subtractions.

Some cyclists are cycling from John O'Groats in northern Scotland to Land's End in Cornwall, over 10 days. It's 874 miles! So far, they have cycled 625 miles. How far have they still got to cycle?



## Practice Sheet Mild

### Counting up

Practise using counting up to solve these subtractions.  
Sketch empty number lines to show your steps.

$$712 - 655$$

$$623 - 589$$

$$535 - 478$$

$$615 - 575$$

$$722 - 684$$

$$525 - 449$$

$$616 - 535$$

$$607 - 569$$

$$925 - 795$$

$$814 - 685$$

## Practice Sheet Hot Counting up

Sketch an empty number line to help you to calculate these subtractions.

1.  $745 - 588$

2.  $762 - 584$

3.  $925 - 767$

4.  $623 - 489$

5.  $755 - 448$

6.  $826 - 682$

7.  $535 - 378$

8.  $756 - 437$

9.  $537 - 373$

10.  $615 - 476$

11.  $634 - 469$

12.  $1002 - 735$

### Challenge

Subtract 989 from 1000. Then subtract 878 from 1000. Then 767, then 656 etc. each from 1000. Describe the pattern of the answers.

## Practice Sheet Answers

### Counting up (mild)

$712 - 655 = 57$

$535 - 478 = 57$

$722 - 684 = 38$

$616 - 535 = 81$

$925 - 795 = 130$

$623 - 589 = 34$

$615 - 575 = 40$

$525 - 449 = 76$

$607 - 569 = 38$

$814 - 685 = 129$

### Counting up (hot)

1.  $745 - 588 = 157$

3.  $925 - 767 = 158$

5.  $755 - 448 = 307$

7.  $535 - 378 = 157$

9.  $537 - 373 = 164$

11.  $634 - 469 = 165$

2.  $762 - 584 = 178$

4.  $623 - 489 = 134$

6.  $826 - 682 = 144$

8.  $756 - 437 = 319$

10.  $615 - 476 = 139$

12.  $1002 - 735 = 267$

### Challenge

$1000 - 989 = 11$

$1000 - 878 = 122$

$1000 - 767 = 233$

$1000 - 656 = 344$

$1000 - 565 = 435$

Watch out for the children using appropriate PV vocabulary in their explanations.



# A Bit Stuck?

Are we nearly there yet?

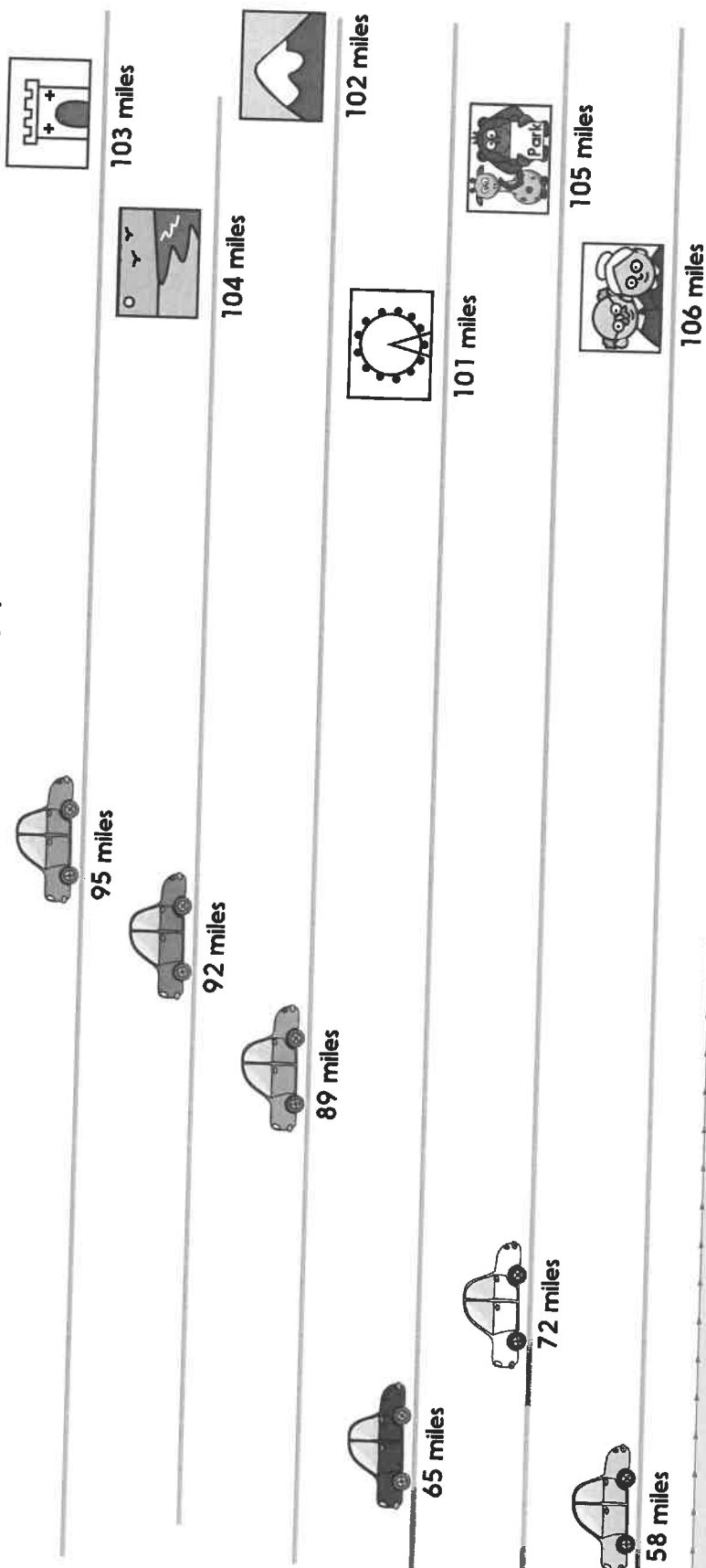
**Work in pairs**

**What to do:**

- Families are going for a day out.
- The children keep asking, "Are we nearly there yet?"
- Work out how much further each family need to travel. Use Frog to help you.

Things you will need:

- A pencil



**S-t-r-e-t-c-h:**

Draw your own jottings to work out  $204 - 197$  and  $204 - 89$ .

**Learning outcomes:**

- I can use Frog to subtract numbers either side of 100, e.g.  $102 - 97$  and  $102 - 78$ .
- I am beginning to subtract numbers either side of 200.

## Check your understanding

### Questions

Complete each diagram.

604	
387	

912	
	868

1003	
578	

---

Here is Ali's homework.

- |   |
|---|
| <ol style="list-style-type: none"><li>1. <math>403 - 265</math></li><li>2. <math>648 - 356</math></li><li>3. <math>752 - 199</math></li><li>4. <math>812 - 754</math></li></ol> |
|---|

Advise him on the most efficient or error-proof subtraction strategy to calculate each one, explaining why you are suggesting that method.

Work out the answers.

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## Check your understanding

### Answers

Complete each diagram.

604	
387	217

912	
44	868

1003	
578	425

---

Here is Ali's homework.

1.  $403 - 265$
2.  $648 - 356$
3.  $752 - 199$
4.  $812 - 754$

Advise him on the most efficient or error-proof subtraction strategy to calculate each one, explaining why you are suggesting that method.

Work out the answers.

1.  $138$  – most efficiently solved by Frog.
2.  $292$  – also solve by Frog, some may prefer column subtraction for this one as neither number is close to a hundreds number, and only one column needs to be adjusted.
3.  $553$  – subtract 200 and add 1 back.
4.  $58$  – count up with Frog.

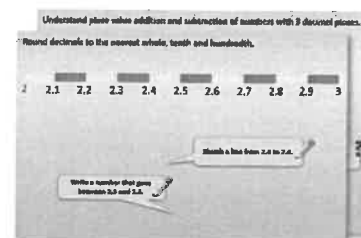


# Year 4: Week 2, Day 5

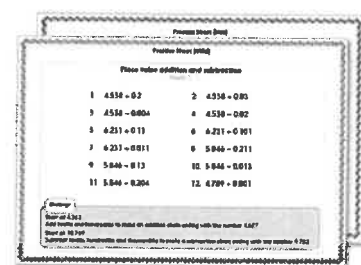
## Column subtraction

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the Learning Reminders. They come from our *PowerPoint* slides.



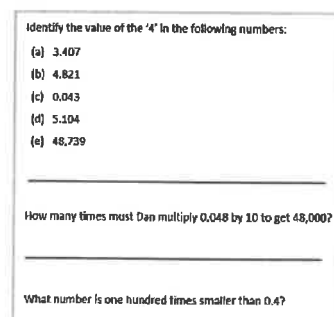
2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?



4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!



## Learning Reminders

Subtract 3-digit numbers using expanded column subtraction.

Let's work out  
 $725 - 462$  using  
column subtraction.

First partition the numbers  
and set them out neatly.

Subtract the 1s.

$$5 - 2 = ?$$

60 is bigger than 20 so  
take 100 from the 700  
and add it to the 10s.

Now subtract the 10s.

$$120 - 60 = ?$$

Subtract the 100s.

$$600 - 400 = ?$$

$$\begin{array}{r} 600 \ 120 \\ \cancel{700} \ \cancel{20} \ 5 \\ - 400 \ 60 \ 2 \\ \hline 200 \ 60 \ 3 \end{array}$$

Finally recombine  
200, 60 and 3.

$$725 - 462 = 263$$

## Learning Reminders

Subtract 3-digit numbers using expanded column subtraction.

Now let's try  $745 - 367$ .  
How many moves across columns  
will we need this time?

7 is bigger than 5 so take  
10 from the 40 and add it  
to the 1s.

$$15 - 7 = ?$$

60 is bigger than 30 so  
take 100 from the 700  
and add it to the 10s.

$$130 - 60 = ?$$

Subtract the 100s.

$$600 - 300 = ?$$

$$\begin{array}{r} 600 \ 130 \ 15 \\ 700 \ 40 \ 7 \\ - 300 \ 60 \ 7 \\ \hline 300 \ 70 \ 8 \end{array}$$

Finally recombine  
300, 70 and 8.

$$745 - 367 = 378$$

## Practice Sheet Mild

### Expanded subtraction

Use expanded column subtraction to solve these calculations.

1.  $265 - 134$

2.  $598 - 372$

3.  $682 - 456$

4.  $364 - 149$

5.  $472 - 253$

6.  $745 - 561$

7.  $874 - 246$

8.  $855 - 278$

9.  $952 - 685$

10.  $344 - 175$

11.  $535 - 488$

12.  $746 - 467$

#### Challenge

Write a 3-digit number. Subtract it from 999. Now say the answer if you were to subtract it from 1000. Check using Frog to subtract it from 1000. Repeat with another 3-digit number.



## Practice Sheet Hot Subtraction

Choose whether to use counting up (Frog) or expanded column subtraction.

$453 - 348 =$

$958 - 482 =$

$674 - 427 =$

$607 - 572 =$

$826 - 645 =$

$803 - 641 =$

$725 - 532 =$

$520 - 315 =$

$847 - 673 =$

$630 - 527 =$

## Practice Sheet Answers

### Expanded subtraction (mild)

- |                      |                       |
|----------------------|-----------------------|
| 1. $265 - 134 = 131$ | 2. $598 - 372 = 226$  |
| 3. $682 - 456 = 226$ | 4. $364 - 149 = 215$  |
| 5. $472 - 253 = 219$ | 6. $745 - 561 = 184$  |
| 7. $874 - 246 = 628$ | 8. $855 - 278 = 577$  |
| 9. $952 - 685 = 267$ | 10. $344 - 175 = 169$ |
| 11. $535 - 488 = 47$ | 12. $746 - 467 = 279$ |

### Subtraction (hot)

- |                   |                   |
|-------------------|-------------------|
| $453 - 348 = 105$ | $958 - 482 = 476$ |
| $674 - 427 = 247$ | $607 - 572 = 35$  |
| $826 - 645 = 181$ | $803 - 641 = 162$ |
| $725 - 532 = 193$ | $520 - 315 = 205$ |
| $847 - 673 = 174$ | $630 - 527 = 103$ |

## A Bit Stuck?

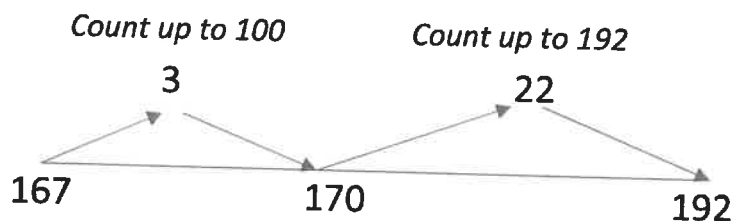
### Parent or carer

Many children at this age find column subtraction very tricky. In this case, we give them more practice on subtracting using the strategy of **counting up** on a number line. This is the method that we all use when finding our change!

Pay £10    Spend £7.25    Count up from £7.25 to £10



So, help your child to do the calculations below by counting up.  
Here's the second one. **192 – 167**



Answer is  $3 + 22 = 25$

You can do every one on the sheet below like this.

This achieves a lot of good things!

- They rehearse the skill of adding to the next multiple of 10 – an absolutely essential skill for numerical fluency.
- They consolidate their understanding of how numbers work – counting from the multiple of 10 to the next number (This is the second hop.)
- They gain confidence, because you can do ANY subtraction this way
- It is a method which is particularly useful for money calculations.

GOOD LUCK!

# A Bit Stuck? Teach the frog

## Work in pairs

### What to do:

Take it in turns to be the teacher and to be the Frog.  
Tell your partner, one step at a time, how to work out the answer to each subtraction.

Remember to use your skills in subtracting 2-digit numbers to help you to subtract 3-digit numbers.

Things you will need:

- A pencil



1.  $92 - 67 =$



2.  $192 - 167 =$



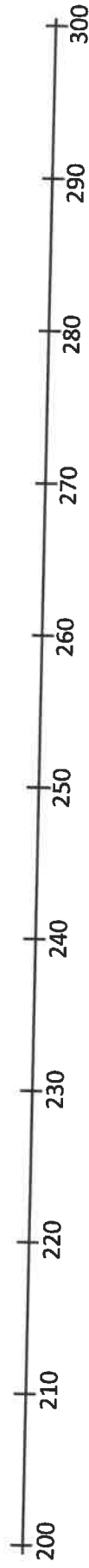
3.  $83 - 45 =$



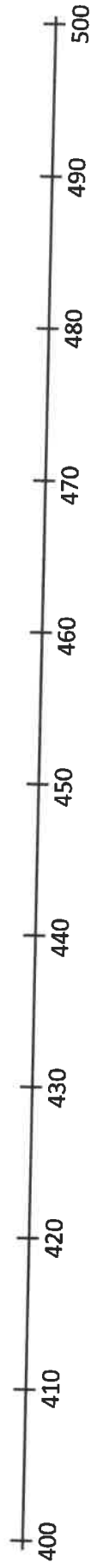
## A Bit Stuck?

### Teach the frog

4.  $283 - 267 =$



5.  $452 - 437 =$



### S-t-r-e-t-c-h:

Draw your own number line jottings to work out  
 $354 - 337$  and  $572 - 549$ .

### Learning outcomes:

- I can use Frog to subtract pairs of 2-digit numbers, using a landmark line to help.
- I can use Frog to subtract pairs of 3-digit numbers, within the same century, using a landmark line to help.
- I am beginning to sketch my own number line jottings when using Frog.

**A Bit Stuck?**  
**Teach the frog**



## Check your understanding *Questions*

Complete this calculation that uses 'column subtraction':

$$\begin{array}{r} 700 \quad 30 \quad 7 \\ - 300 \quad 60 \quad 5 \\ \hline \end{array}$$

Fill the gaps in this subtraction:

$$81\boxed{\phantom{0}} - 4\boxed{\phantom{0}}7 = \boxed{\phantom{0}}46$$

Fold here to hide answers

## Check your understanding *Answers*

Complete this calculation that uses 'column subtraction':

$$\begin{array}{r} 600 \quad 130 \\ \del{700} \quad \del{30} \quad 7 \\ - 300 \quad 60 \quad 5 \\ \hline 300 \quad 70 \quad 2 \end{array}$$

Fill the gaps in this subtraction:

$$81\boxed{3} - 4\boxed{6}7 = \boxed{3}46$$

Probably best-solved by setting out as a column subtraction.





## What to do today

*IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.*

### 1. Take notes from a video

- Watch the Steve Backshall video clip about Grey Wolves:  
<https://www.youtube.com/watch?v=pi3KPf1LuLM>
- When you have finished, make some notes about 3-5 things that you remember from the video.
- Now watch again. Spot answers to the questions on *Video watching*:

### 2. Answer questions from a report

- Read *Wolf Report 1*.
- Now either answer *Wolf Report 1 Questions* or, if you would like more of a challenge, read *Wolf Report 2* and answer the questions about it instead.

*When you have finished, talk to a grown-up about your answers. Show them where you found the answers in the text.*

### 3. Add captions to a picture

- Add some of the facts that you have learnt to the *Wolf Picture*. Write in your own words and choose where you will write each fact.

### Try the Fun-Time Extra

- Read the poem, 'A wolf in the park'. Can you learn some or all of it by heart? Can you write another verse? Can you make some illustrations that would fit the different verses?

## Video Watching

As you watch, look for answers to these questions:

- How much more powerful is a wolf bite than a German Shepherd police-dog?
- How much more powerful is a wolf's sense of smell than ours?
- How far way can wolves hear another's howl?



# Wolf Report 1

## **Appearance**

Adult wolves are usually 1.4 to 1.8 metres in length from nose to tail. Wolves living in the far north tend to be larger than those living further south. As adults they may weigh typically between 23 to 50 kilograms. The heaviest wolf recorded weighed 86 kilograms.

Wolves usually measure 65–97 centimetres at the shoulder. Wolves have fur made up of two layers. The top layer is resistant to dirt, and the under layer is water resistant. The colour of their fur can be any combination of grey, white, red, brown, and black.



## **Diet**

Wolves are carnivores and eat mostly medium to large size hoofed animals, but they will also eat smaller animals. Some wolves have been seen eating salmon, seals, beached whales, lizards, snakes and birds. Wolves usually stalk old or sick animals, but they do not always catch what they stalk. They may go days without food. Sometimes only one out of twelve hunts are successful. But the way they eat stays the same. The alpha male and female feed first. Then the other members feed. Sometimes (especially if the prey they have killed is large) wolves may store food and come back that day to feed on it. Wolves have very sharp teeth which helps them tear large chunks of meat from a dead animal. Wolves will also swallow food and then bring it back up for pups to eat.

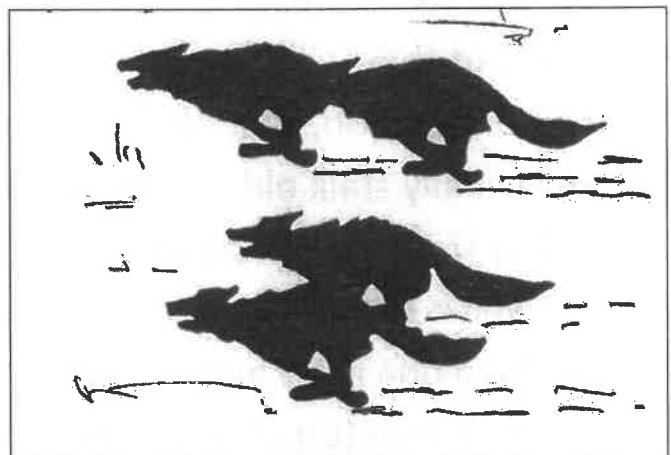
## Life

Wolves live in groups called "packs". They hunt in packs. The members of the pack are usually family members, often just the parents and offspring. Wolves that are not family may join if they do not have a pack of their own. Packs are usually up to twelve wolves, but they can be as small as two or as large as twenty-five. The leaders are called the parent male and the parent female. Their territory is marked by scent and howling; they will fight any intruders. Young wolves are called 'pups' or 'whelps'. Adult females usually give birth to five or six pups in a litter.

Wolves make a noise called a howl. They howl to communicate with each other from long distances and to mark the edges of their territory. Wolves have a complicated body language.

Wolves can run very fast and far. A wolf can run 20–30 miles in a day.

Grey wolves can live six to eight years. They can live in captivity for up to 17 years.



## Wolf Report 2

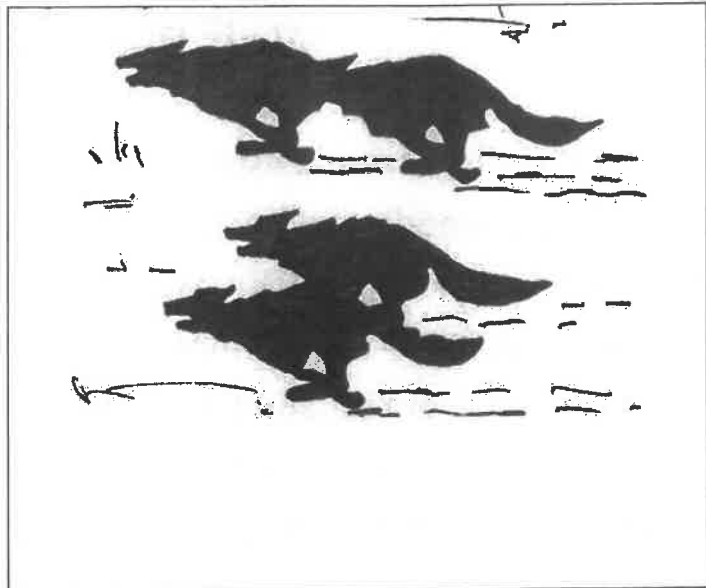
The grey wolf is the largest existing member of the Canidae family, apart from some large breeds of domestic dog. Grey wolf weight and size can vary greatly worldwide, with the large wolves of Alaska and Canada sometimes weighing 3–6 times more than their Middle Eastern and South Asian cousins. On average, adult wolves measure 105–160 cm in length and 80–85 cm in shoulder height. The tail measures 29–50 cm in length. The ears are 90–110 mm in height, and the hind feet are 220–250 mm. The mean body mass of the extant grey wolf is 40 kg with the smallest specimen recorded at 12 kg and the largest at 79.4 kg.

Compared to its closest wild cousins (the coyote and golden jackal), the grey wolf is larger and heavier, with a broader snout, shorter ears, a shorter torso and longer tail. It is a slender, powerfully built animal with a large, deeply descending ribcage, a sloping back and a heavily muscled neck. The wolf's legs are moderately longer than those of other canids, which enables the animal to move swiftly, and allows it to overcome the deep snow that covers most of its geographical range.

The ears are relatively small and triangular. Females tend to have narrower muzzles and foreheads, thinner necks, slightly shorter legs and less massive shoulders than males. The grey wolf usually carries its head at the same level as the back, raising it only when alert. It usually travels at a loping pace, placing its paws one directly in front of the other.



This gait allows the wolf to cover great distances. The grey wolf has a running gait of km/h 34–43 mph, can leap 5 m horizontally in a single bound, and can maintain rapid pursuit for at least 20 minutes.



The grey wolf's head is large and heavy, with a wide forehead, strong jaws and a long, blunt muzzle. The skull averages 230–280 mm in length, and 130–150 mm wide. The teeth are heavy and large, being better suited to crushing bone than those of other extant canids, though not as specialised as those found in hyenas. Its molars have a flat chewing surface. The grey wolf's jaws can exert a crushing pressure of perhaps 10,340 kPa (1,500 psi) compared to 5,200 kPa for a German shepherd. This force is sufficient to break open most bones.

The grey wolf has very dense and fluffy winter fur, with short underfur and long, coarse guard hairs. Most of the underfur and some of the guard hairs are shed in the spring and grow back in the autumn period. The longest hairs occur on the back, particularly on the front quarters and neck. Especially long hairs are on the shoulders, and almost form a crest on the upper part of the neck. The hairs on the cheeks are elongated and form tufts. The ears are covered in short hairs, which strongly project from the fur.

The winter fur is highly resistant to cold; wolves in northern climates can rest comfortably in open areas at  $-40^{\circ}$  by placing their muzzles between the rear legs and covering their faces with their tail.

Wolf fur provides better insulation than dog fur and does not collect ice when warm breath is condensed against it. In warm climates, the fur is coarser and scarcer than in northern wolves. Female wolves tend to have smoother furred limbs than males, and generally develop the smoothest overall coats as they age. Older wolves generally have more white hairs in the tip of the tail, along the nose and on the forehead.



Coat colour ranges from almost pure white through various shades of blond, cream, and ochre to greys, browns, and blacks. Black specimens are more common in North America than in Eurasia, with about half the wolves in Yellowstone National Park being black.

## Wolf Report 1 Questions

*These questions are about Wolves Appearance*

How long are adult wolves?

What are they measured to and from?

What was the weight of the heaviest wolf recorded?

What colours can wolf fur be?

*These questions are about Wolves Life*

What is the name for a group of wolves?

What is the largest size of a pack of wolves?

What are two names for young wolves?

How far can a wolf run in a day?

*These questions are about Wolves Diet*

What do wolves mainly eat?

What type of animals do wolves stalk?

Which wolves feed first?

What do their sharp teeth help wolves to do?



## **Wolf Report 2 Questions**

What makes wolves a distinctive member of their family?

How could someone distinguish between a grey wolf and a golden jackal?

Would you describe a wolf as slender? Why/why not?

What could you tell about a wolf if you saw its head raised?

How is a wolf's gait suited to its behaviour?

How is a wolf's jaw suited to its diet?

Why do you think that a wolf's underfur is shed?

What does it mean to describe the hairs on a wolf's cheeks as elongated?

How might someone spot an older wolf in a pack? How might they identify a female?

Where might you be most likely to see a black coloured wolf?

## Wolf Picture



## **A wolf in the park**

Is there a wolf,  
A wolf in the park,  
A wolf who wakes when the night gets dark?  
Is there a wolf in the park?

Is there a wolf,  
A wolf who creeps  
From his hidden den while the city sleeps?  
Is there a wolf in the park?

Is there a wolf,  
Whose nightly track  
Circles the park fence, zigzags back?  
Is there a wolf in the park?

Is there a wolf,  
Who pads his way  
Between the tables of the closed café,  
Is there a wolf in the park?

Is there a wolf,  
A wolf whose bite  
Left those feathers by the pond last night,  
Is there a wolf in the park?

Is there a wolf?  
No one knows,  
But I've heard a howl when the full moon glows . . .  
Is there a wolf in the park?

by Richard Edwards



## What to do today

**IMPORTANT** Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

### 1. Read a report and decide sub-titles for the paragraphs

- Read *Grey Wolf Report*
- Decide a sub-heading for each of the paragraphs. Write your sub-heading on the report, above each of the paragraphs.
- Look at *Grey Wolf Report Diagram*. Can you match each circle to the paragraphs in the report? Put a number on each of the circles in the diagram to show which paragraph matches.

### 2. Making a skeleton diagram from a report.

- Read *Arctic Wolf Report*.
- Look at *Arctic Wolf Report Diagram*. Write the facts that have been used in the report as notes in the rectangle boxes.

### 3. Researching vocabulary

- Read the *Vocabulary List*. This is some technical vocabulary to do with wolves. Choose five words that you are not sure about and use a web-search to find out their meaning. Write a short definition.

### Try the Fun-Time Extras

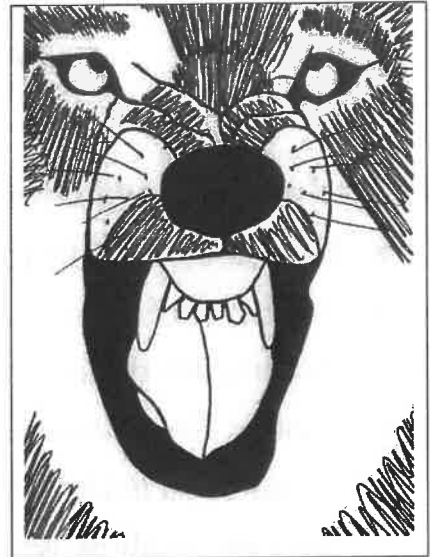
- Make a visual glossary from the *Vocabulary List*. Choose some words, write the meanings and illustrate them to make the meaning really clear.
- Choose either the Grey Wolf or the Arctic Wolf and try to find out more about them. What is the most surprising thing about this animal? What is the thing that it is most important that people know?
- Read the *Hunt Text*. Make pictures that would show each stage of the hunt.

## Grey Wolf Report

The grey wolf is a member of the dog or canine family. They are a territorial, social and predatory animal. Their Latin name is *Canis lupus*.

The grey wolf inhabits the wilderness and remote areas of Eurasia and North America. They can live in a variety of habitats and may be found in deserts, grasslands, forests and arctic tundras.

The grey wolf can appear similar to other types of wolf. Like the red wolf though, it is distinguished by its larger size and less pointed features, particularly on the ears and muzzle. Its fur is long and bushy and is mainly mottle grey in colour.



The grey wolf is large, powerful and heavy. Its body is designed so that it can cover long distances and it can move very quickly when it is hunting. It has very strong teeth that are sufficient to break open most bones. Its fur is highly resistant to cold and provides better insulation than dog fur.

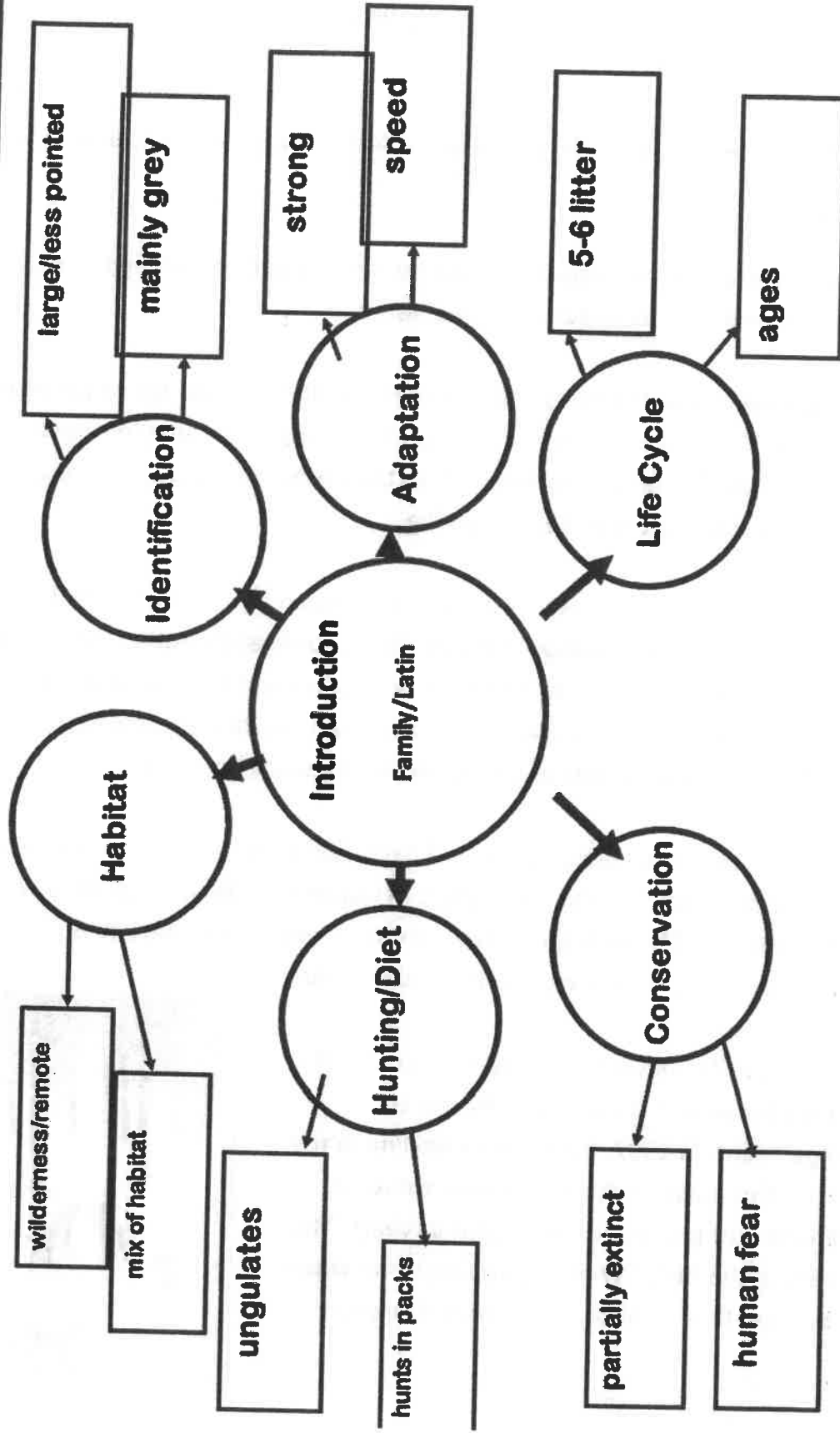
Wolves are carnivores and mainly eat large, hooved mammals (ungulates). It specialises in preying on vulnerable individuals of large prey. It will hunt in packs or individually. Grey wolves locate their prey through scent and then conceal themselves as they approach. They try to intimidate their prey into running and then chase it (to wear it out) before catching and eating it.

Wolf pups are born in the spring. On average a litter will consist of 5-6 pupils. Female wolves give birth in dens. Pups first leave the den after 3 weeks. After six weeks they are agile enough to escape from danger. By the autumn they are mature enough to accompany adults on hunts for large prey. Wolves tend to live together in groups called 'packs'. Most wolves live about seven years.

The Wolf is now extinct in much of Western Europe, in Mexico and in the United States. This is mainly because of the actions of humans who fear wolves' attacks on their livestock. Wolves are an important predator and their presence in the environment can help the health of other animals and plants.

## Grey Wolf Report Diagram

### Title: Grey Wolf Report



## **Arctic Wolf Report**

The Arctic wolf (*Canis lupus arctos*), also known as the white wolf or polar wolf, is a subspecies of grey wolf.

It inhabits the Queen Elizabeth Islands in the Arctic from Melville Island to Ellesmere Island.

The Arctic wolf can be distinguished from the grey wolf by its smaller size, its white coat, its narrower head and its larger carnassial teeth.

The Arctic Wolf is adapted to its cold surrounding. It has white fur which allows it to blend into its surrounding. It preserves heat by having much smaller more-rounded ears and it has a shorter muzzle and shorter legs than other wolves. They are bulkier than grey wolves. Some males grow as heavy as 80kg.

In the wild, Arctic wolves primarily prey on muskoxen and Arctic hares. They have also been found to prey on lemmings, caribou, Arctic foxes and beetles. Arctic wolves hunt in packs. They roam large areas to find their prey up to and beyond 2600km<sup>2</sup>. They will follow migrating caribou in the winter. Polar bears are rarely encountered by wolves, though there are two records of wolf packs killing polar bear cubs.

Arctic Wolves use rock outcroppings and caves for dens as the ground can be too cold to dig. The mother gives birth to 2 or 3 pups in late May or Early June about a month later than Grey Wolves. The wolf pups stay with their mother for two years. The average lifespan of an Arctic Wolf is between 7 and 10 years.

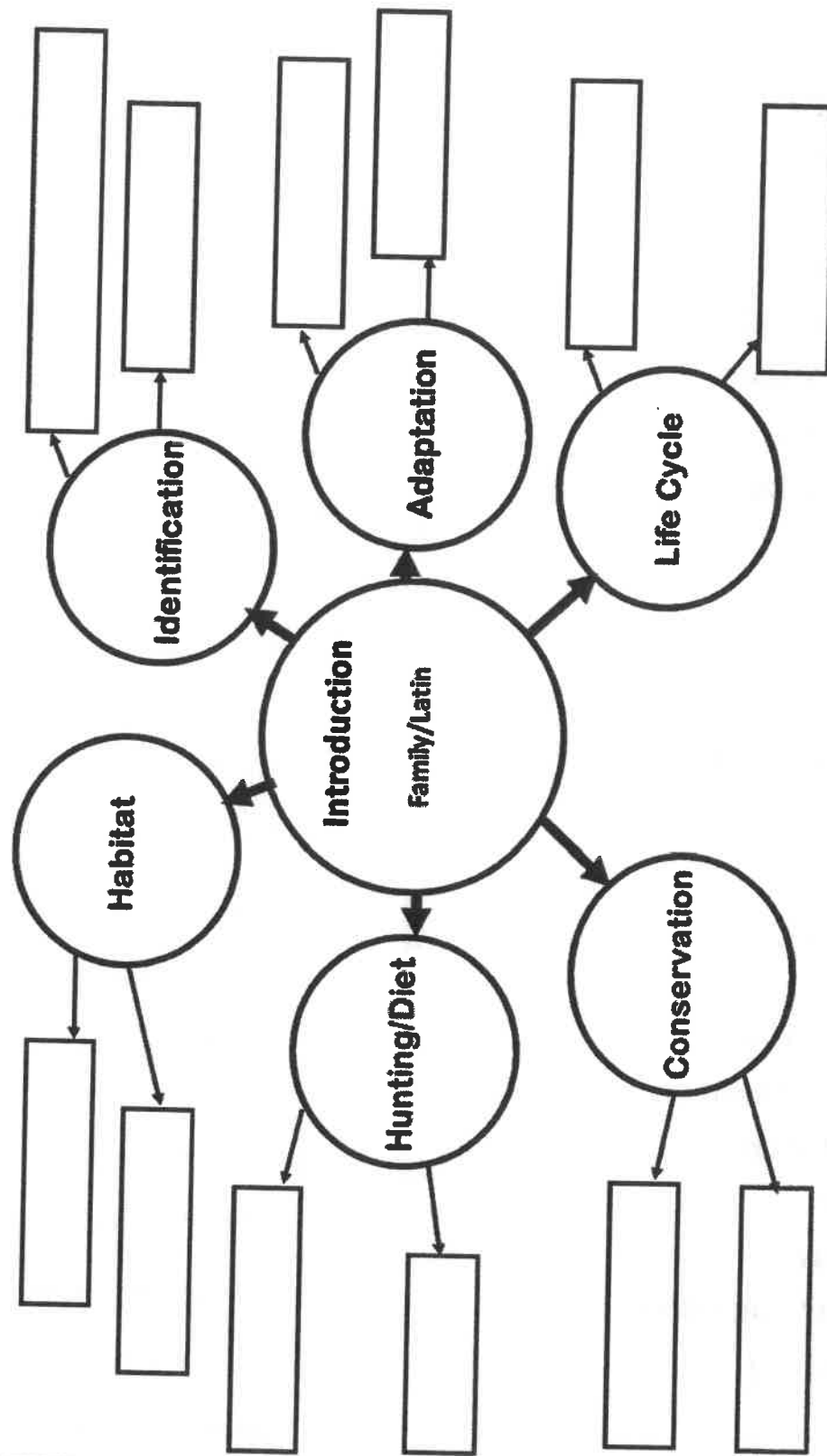
The Arctic Wolf is classed as 'Least Concern' as its population is stable. It does face threats of endangerment. In 1997, there was a decline in the Arctic wolf population due to harmful weather conditions during the summers for four years. The recovery of the Arctic Wolf population came when summer weather conditions returned to normal.





## Arctic Wolf Report Diagram

**Title: Arctic Wolf**



## Vocabulary List

canine  
native  
extant  
distinguished  
species  
muzzle  
mottled  
specialised  
adaptations  
gregarious  
expressive  
hybrid  
social  
nuclear family  
offspring  
apex predator  
ungulates  
carrion  
habitat  
dense  
insulation  
competition  
territorial  
litter  
carcass  
communication  
olfactory

Definition: \_\_\_\_\_

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Definition: \_\_\_\_\_

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Definition: \_\_\_\_\_

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\_\_\_\_\_

## Hunt Text

A grey wolf hunt can be divided into five stages:

### **Locating prey**

The wolves travel in search of prey through their power of scent, chance encounter, and tracking. Wolves typically locate their prey by scent, though they must usually be directly downwind of it. When a breeze carrying the prey's scent is located, the wolves stand alert, and point their eyes, ears and nose towards their target.

### **The stalk**

The wolves attempt to conceal themselves as they approach. As the gap between the wolves and their prey closes, the wolves quicken their pace, wag their tails, and peer intently, getting as close to their quarry as possible without making it flee.

### **The encounter**

Once the prey detects the wolves, it can either approach the wolves, stand its ground, or flee. Large prey, such as moose, elk, and muskoxen, usually stand their ground. Should this occur, the wolves hold back, as they require the stimulus of a running animal to proceed with an attack. If the targeted animal stands its ground, the wolves either ignore it, or try to intimidate it into running.

### **The rush**

If the prey attempts to flee, the wolves immediately pursue it. This is the most critical stage of the hunt, as wolves may never catch up with prey running at top speed. If their prey is travelling in a group, the wolves either attempt to break up the herd, or isolate one or two animals from it.

### **The chase**

A continuation of the rush, the wolves attempt to catch up with their prey and kill it. When chasing small prey, wolves attempt to catch up with their prey as soon as possible, while with larger animals, the chase is prolonged, in order to wear the selected prey out.



## What to do today

**IMPORTANT** Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

### 1. Read the poem: How the Bumble-Bee got his Stripes

- Read the poem *How the Bumble-Bee got his Stripes*. Read it in your head the first time and then try reading it out loud. Can you make the poem flow as you read it?

### 2. Search for the features of a narrative poem

- Read *Narrative Poem Features*
- Decide which of these are features of the Bumble-Bee poem. (Not all of them are).
- Write on the poem, to show some of the features that you have spotted.

### 3. Write sentences with noun-phrases

- Use the *Revision Card* to remind you about noun phrases.
- Now write some sentences about the animal characters from the poem. Use a descriptive noun-phrase in each of your sentences. Look at the *Examples* to see how to do this.
- Use the pictures of *The Animals* to inspire you. Try to write two sentences for each animal.

*When you have finished, talk to a grown-up about your sentences. Show them the noun phrases that you used.*

### Try the Fun-Time Extra

- Watch the story of the Tiger and Stripes:  
<https://www.youtube.com/watch?v=rf7ascNGbcM>
- How is it similar to the story of the bumble-bee? How is it different? Which do you prefer? Why?
- Can you write some descriptive sentences about the tiger?

## How the Bumble-Bee Got His Stripes

On the day that the world began,  
Each of the creatures was shown  
All the colours of the universe;  
And all were told to choose  
Which of these they wanted for themselves.



Well, that day the elephant  
Thought carefully and chose to be grey,  
But the bumble-bee  
Just bumbled around and buzzed around  
And couldn't make up his mind  
And the yellow sun shone so brightly  
That the bumble-bee's bum became yellow

And that night the goldfish  
Thought carefully and chose to be golden,  
But the bumble-bee  
Just bumbled around and buzzed around  
And couldn't make up his mind  
And the black night grew so dark  
That the bumble-bee's hips became black

And the next day the cricket  
Thought carefully and chose to be green,  
But the bumble-bee  
Just bumbled around and buzzed around  
And couldn't make up his mind,  
And the yellow sun shone so brightly  
That the bumble-bee's waist became yellow

And that night the owl  
Thought carefully and chose to be brown,  
But the bumble-bee  
Just bumbled around and buzzed around

And couldn't make up his mind,  
And the black night grew so dark  
That the bumble-bee's chest became black.

And next day the polar bear  
Thought carefully and chose to be white,  
But the bumble-bee  
Just bumbled around and buzzed around  
And couldn't make up his mind,  
And the yellow sun shone so brightly  
That the bumble-bee's shoulders became yellow.

And that night the jay  
Thought carefully and chose to be blue,  
But the bumble-bee  
Just bumbled around and buzzed around  
And couldn't make up his mind,  
And the black night grew so dark  
That the bumble-bee's neck and head and legs became black.

And next day the bumble-bee  
Began to be thoughtful,  
He bumbled around and buzzed around  
But thought carefully,  
And chose the colours he wanted to be,  
He said, I've made up my mind.  
I want to be all the colours of the rainbow  
But it was too late  
Because the bumble-bee  
Had already become  
Black-striped  
And yellow-striped,  
From the top of his head  
To the tip of this toes

*Nick Toczec – The Works p60*

## Narrative Poem Features

- **Introduction** - some lines or a verse
- **Characters** – like in a story
- **Plot** – a storyline like in a story
- Chronological series of **events** (This happened, then that, after that... etc.) using time sequencing words (then, next, afterwards, etc.)
- Sometimes have ***rhyming couplets***
- Often have a fairly regular ***rhythm***
- Intended to be **read aloud** – have colloquial language and punctuation to aid this.
- Sometimes have ***dialogue***



## Revision Card – Noun Phrases

### Nouns

A noun names a person, place, idea, thing or feeling.



a bumble-bee  
the universe  
a question  
an answer



In front of a **noun**, we often have  
a an the

### Adjectives

An **adjective** is a describing word.  
It tells you more about a **noun**.



the sweet nectar  
an intricate tongue  
an elegant creature  
a contented buzz



The flower was perfect.

Adjectives sometimes come next to 'their' nouns...  
*but sometimes they do not.*

### Noun Phrases

A noun phrase adds extra detail to the noun.



the sweet, sugar-filled nectar  
the intricate, hollow tongue  
the elegant bumble-bee  
a contented buzz



It can be made by adding an adjective or two.

### Spotting a Noun Phrase

A noun phrase can be replaced by a pronoun.

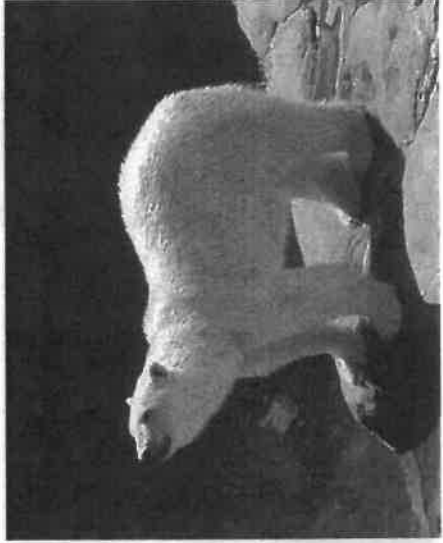
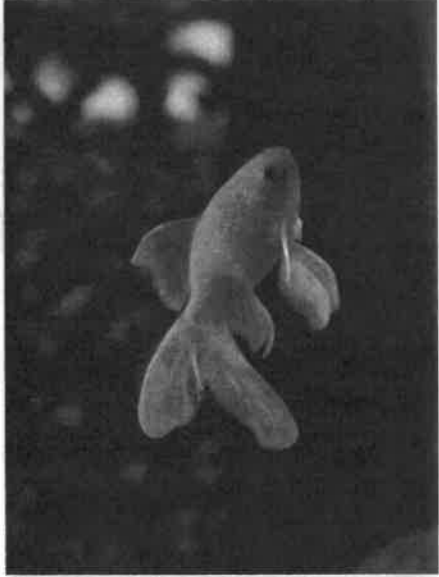
The sweet sugar-filled nectar attracted the bee.  
The intricate hollow tongue reached the nectar.  
The elegant bumble-bee flew through the air.  
The bee made the contented buzz.



It attracted the bee.  
It reached the nectar.  
It flew through the air.  
The bee made it.

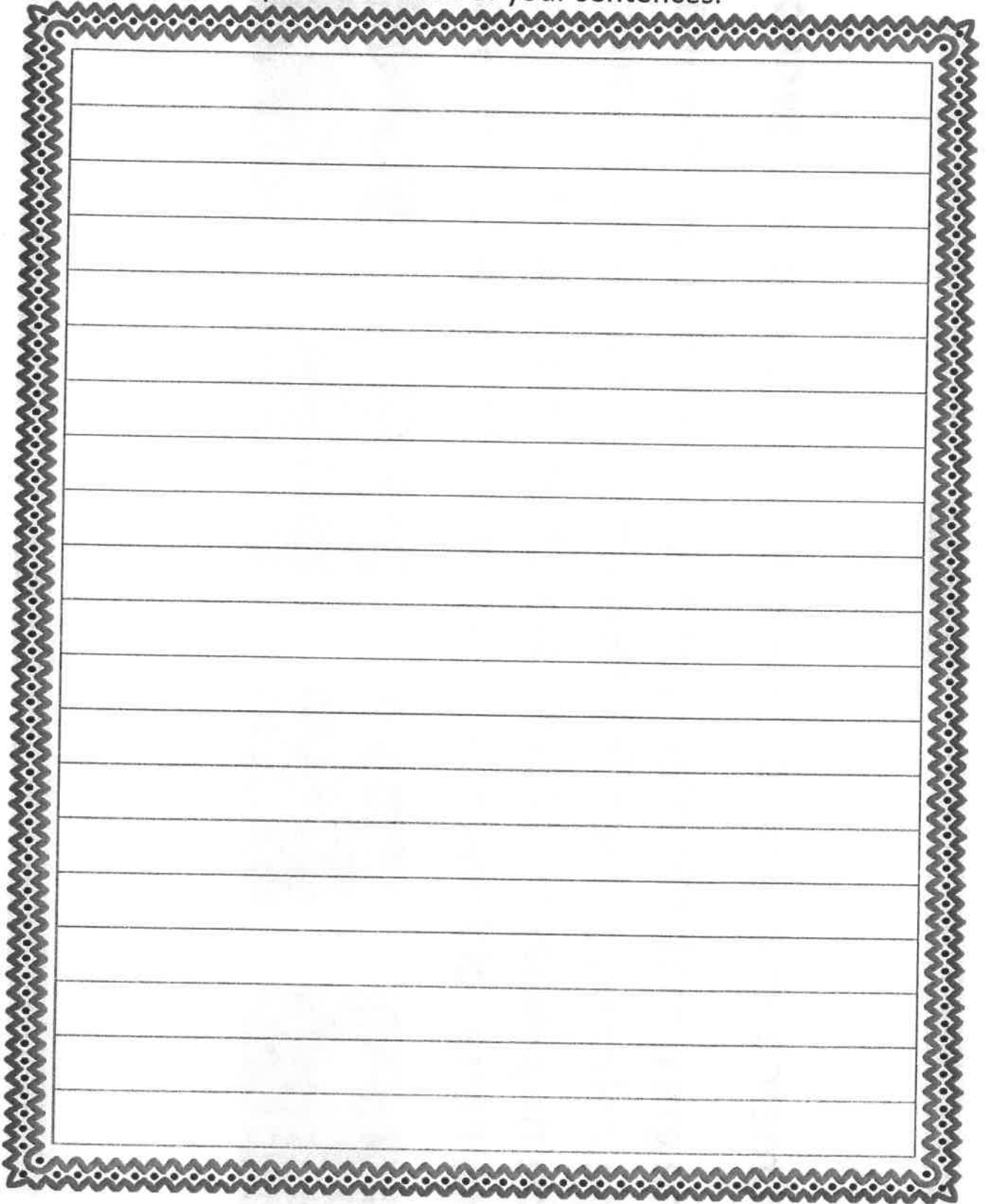


## The Animals



## Animal Sentences

Write your sentences about the animal characters here. Include a descriptive noun phrase in each of your sentences.



A large rectangular writing area with a decorative border. The border consists of a repeating pattern of small, stylized 'X' or 'Z' shapes. Inside the border, there are 20 horizontal lines for writing, providing a structured space for the student to write their sentences.

## Examples

**Remember: a noun phrase can be replaced by a pronoun.**

**The grey, majestic elephant thundered through the jungle.**

**The delicate, golden fish floated flickering in the water.**

**The tiny, emerald cricket leapt high into the air.**

**The fierce, old polar-bear ran straight towards the camp.**



## What to do today

**IMPORTANT** Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

### 1. Read or listen to the poem: *The Dragon Who Ate Our School*

- Read or listen to the poem *The Dragon Who Ate Our School* (provided as a sound file). Then read it out loud for yourself. Can you make the beat of the poem clear as you read?

### 2. Search for the features of a narrative poem.

- Read *Narrative Poem Features* again.
- Decide which of the features are in this poem. Is that different from the Bumble-Bee poem?
- Write on the poem to show some features that you spotted.

### 3. Write noun-phrases using prepositions

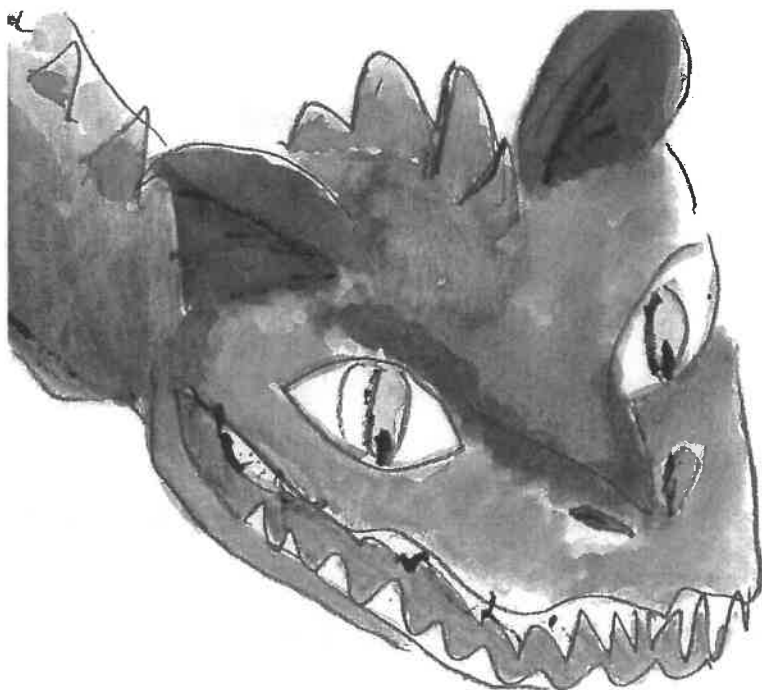
- Use the *Revision Card* to remind you about using prepositions to write noun-phrases.
- Now write some sentences about things that the dragon ate. Use the pictures on *The dragon ate...* to remind you.
- Use prepositions to make noun phrases part of your sentences. (There's a list of prepositions on the *Revision Card*.)
- Try to write between 5 and 10 sentences.

*When you have finished, talk to a grown-up about your sentences. Show them the prepositions that you have used.*

### Try one of the Fun-Time Extras

- Look at the picture of *The Dragon*. Can you write some really descriptive sentences with noun phrases about this creature?
- Can you learn any of the poem off by heart?

## The Dragon Who Ate Our School



The day the dragon came to call,  
she ate the gate, the playground wall  
and, slate by slate, the roof and all,  
the staffroom, gym, and entrance hall,  
and every classroom, big or small.

So . . .

She's undeniably great.

She's absolutely cool,

the dragon who ate

the dragon who ate

the dragon who ate our school.

Pupils panicked. Teachers ran.

She flew at them with wide wingspan.

She slew a few and then began

to chew through the lollipop man,  
two parked cars and a transit van.

Wow . . .!

She's undeniably great.

She's absolutely cool,

the dragon who ate

the dragon who ate

the dragon who ate our school.

She bit off the head of the head.

She said she was sad he was dead.

He bled and he bled and he bled.

And as she fed, her chin went red

and then she swallowed the cycle shed.

Oh . . .

She's undeniably great.  
She's absolutely cool,  
the dragon who ate  
the dragon who ate  
the dragon who ate our school.

It's thanks to her that we've been freed.  
We needn't write. We needn't read.  
Me and my mates are all agreed,  
we're very pleased with her indeed.  
So clear the way, let her proceed

Cos...

She's undeniably great.  
She's absolutely cool,  
the dragon who ate  
the dragon who ate  
the dragon who ate our school.

There was some stuff she couldn't eat.  
A monster forced to face defeat,  
She spat it out along the street –  
The dinner ladies' veg and meat  
And that pink muck the serve for sweet

But...

She's undeniably great.  
She's absolutely cool,  
the dragon who ate  
the dragon who ate  
the dragon who ate our school.



## Narrative Poem Features

- **Introduction** - some lines or a verse
- **Characters** – like in a story
- **Plot** – a storyline like in a story
- Chronological series of **events** (This happened, then that, after that... etc.) using time sequencing words (then, next, afterwards, etc.)
- Sometimes have **rhyming couplets**
- Often have a fairly regular **rhythm**
- Intended to be **read aloud** – have colloquial language and punctuation to aid this.
- Sometimes have **dialogue**



## Revision Card – Prepositions

### Prepositions

Prepositions tell us how words are related.

of  
with  
without  
outside  
by  
from  
above  
over  
on  
between  
inside  
under  
below

Prepositions are useful for adding extra information about a noun.

### Expanded Noun Phrases

You can develop an expanded noun phrase by using a prepositional phrase.

*He saw the wild, fierce dragon.*

*He saw the wild, fierce dragon from a land far-away.*

*He saw the wild, fierce dragon inside the school.*

*He saw the wild, fierce dragon next to the broken windows.*

The prepositional phrase modifies the noun.

Prepositions  
with, of  
by, from  
on, under, below,  
between, inside,  
next to, over, by, in



### Building Expanded Noun Phrases

Prepositions  
with, of  
by, from  
on, under, below,  
between, inside,  
next to, over, by, in



*She ate the colourful, striped gates*

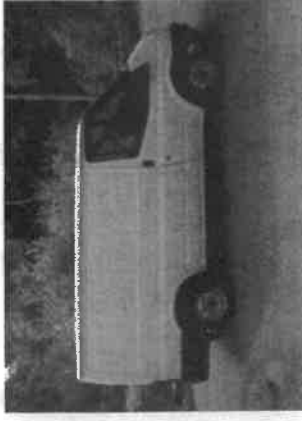
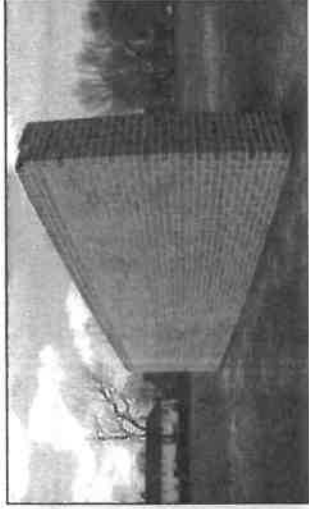
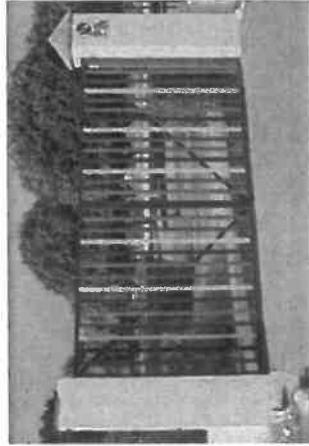
*She ate the tall, brick wall*

*She ate a parked car*

*She ate the terrified teacher*

*Choose a noun phrase to expand using a preposition.*

**The dragon ate...**



## Dragon Sentences

A worksheet titled "Dragon Sentences" featuring a decorative border with a repeating zigzag and dot pattern. The central area is filled with 20 horizontal lines for writing, arranged in a single column. The lines are evenly spaced and extend across the width of the page, leaving a small margin on the left and right sides.

## The Dragon



## What to do today

**IMPORTANT** Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

### 1. Read both the poems

- Read the two narrative poems from the last sessions: *How the Bumble-Bee Got his Stripes* and *The Dragon Who Ate Our School*.
- Which of the poems do you prefer? Write three reasons why?

### 2. Make a story-board for one of the poems

- Use *Storyboard* to tell the story of your favourite of the two poems.
- Think about how to tell the story in six sections and use words and pictures to show the main parts of the story.

### 3. Now for some writing

- Write a story version of one of the poems.
- Think about using noun phrases in some of your sentences. Use prepositions to make some of your noun-phrases.

*Read your story to a grown-up. Can you show them the noun-phrases that you have used?*

### Try some of the Fun-Time Extras

- These poems are by Nick Toczek. Can you find some other poems by this writer?
- Here is Nick Toczek reading the dragon poem. Can you practise so that you can perform the poem just as confidently?  
<https://www.youtube.com/watch?v=woSmfQATnNc>
- Listen to this song version of the poem. Can you join in?  
[https://www.youtube.com/watch?v=QzU1\\_8wflUo](https://www.youtube.com/watch?v=QzU1_8wflUo)

## How the Bumble-Bee Got His Stripes

On the day that the world began,  
Each of the creatures was shown  
All the colours of the universe;  
And all were told to choose  
Which of these they wanted for themselves.



Well, that day the elephant  
Thought carefully and chose to be grey,  
But the bumble-bee  
Just bumbled around and buzzed around  
And couldn't make up his mind  
And the yellow sun shone so brightly  
That the bumble-bee's bum became yellow

And that night the goldfish  
Thought carefully and chose to be golden,  
But the bumble-bee  
Just bumbled around and buzzed around  
And couldn't make up his mind  
And the black night grew so dark  
That the bumble-bee's hips became black

And the next day the cricket  
Thought carefully and chose to be green,  
But the bumble-bee  
Just bumbled around and buzzed around  
And couldn't make up his mind,  
And the yellow sun shone so brightly  
That the bumble-bee's waist became yellow

And that night the owl  
Thought carefully and chose to be brown,  
But the bumble-bee

Just bumbled around and buzzed around  
And couldn't make up his mind,  
And the black night grew so dark  
That the bumble-bee's chest became black.

And next day the polar bear  
Thought carefully and chose to be white,  
But the bumble-bee  
Just bumbled around and buzzed around  
And couldn't make up his mind,  
And the yellow sun shone so brightly  
That the bumble-bee's shoulders became yellow.

And that night the jay  
Though carefully and chose to be blue,  
But the bumble-bee  
Just bumbled around and buzzed around  
And couldn't make up his mind,  
And the black night grew so dark  
That the bumble-bee's neck and head and legs became black.

And next day the bumble-bee  
Began to be thoughtful,  
He bumbled around and buzzed around  
But thought carefully,  
And chose the colours he wanted to be,  
He said, I've made up my mind.  
I want to be all the colours of the rainbow  
But it was too late  
Because the bumble-bee  
Had already become  
Black-striped  
And yellow-striped,  
From the top of his head  
To the tip of this toes

# The Dragon Who Ate Our School



The day the dragon came to call,  
she ate the gate, the playground wall  
and, slate by slate, the roof and all,  
the staffroom, gym, and entrance hall,  
and every classroom, big or small.

So . . .

She's undeniably great.

She's absolutely cool,

the dragon who ate

the dragon who ate

the dragon who ate our school.

Pupils panicked. Teachers ran.

She flew at them with wide wingspan.

She slew a few and then began

to chew through the lollipop man,  
two parked cars and a transit van.

Wow . . .!

She's undeniably great.

She's absolutely cool,

the dragon who ate

the dragon who ate

the dragon who ate our school.

She bit off the head of the head.

She said she was sad he was dead.

He bled and he bled and he bled.

And as she fed, her chin went red

and then she swallowed the cycle shed.



Oh . . .

She's undeniably great.  
She's absolutely cool,  
the dragon who ate  
the dragon who ate  
the dragon who ate our school.

It's thanks to her that we've been freed.  
We needn't write. We needn't read.  
Me and my mates are all agreed,  
we're very pleased with her indeed.  
So clear the way, let her proceed

Cos...

She's undeniably great.  
She's absolutely cool,  
the dragon who ate  
the dragon who ate  
the dragon who ate our school.

There was some stuff she couldn't eat.  
A monster forced to face defeat,  
She spat it out along the street –  
The dinner ladies' veg and meat  
And that pink muck the serve for sweet

But...

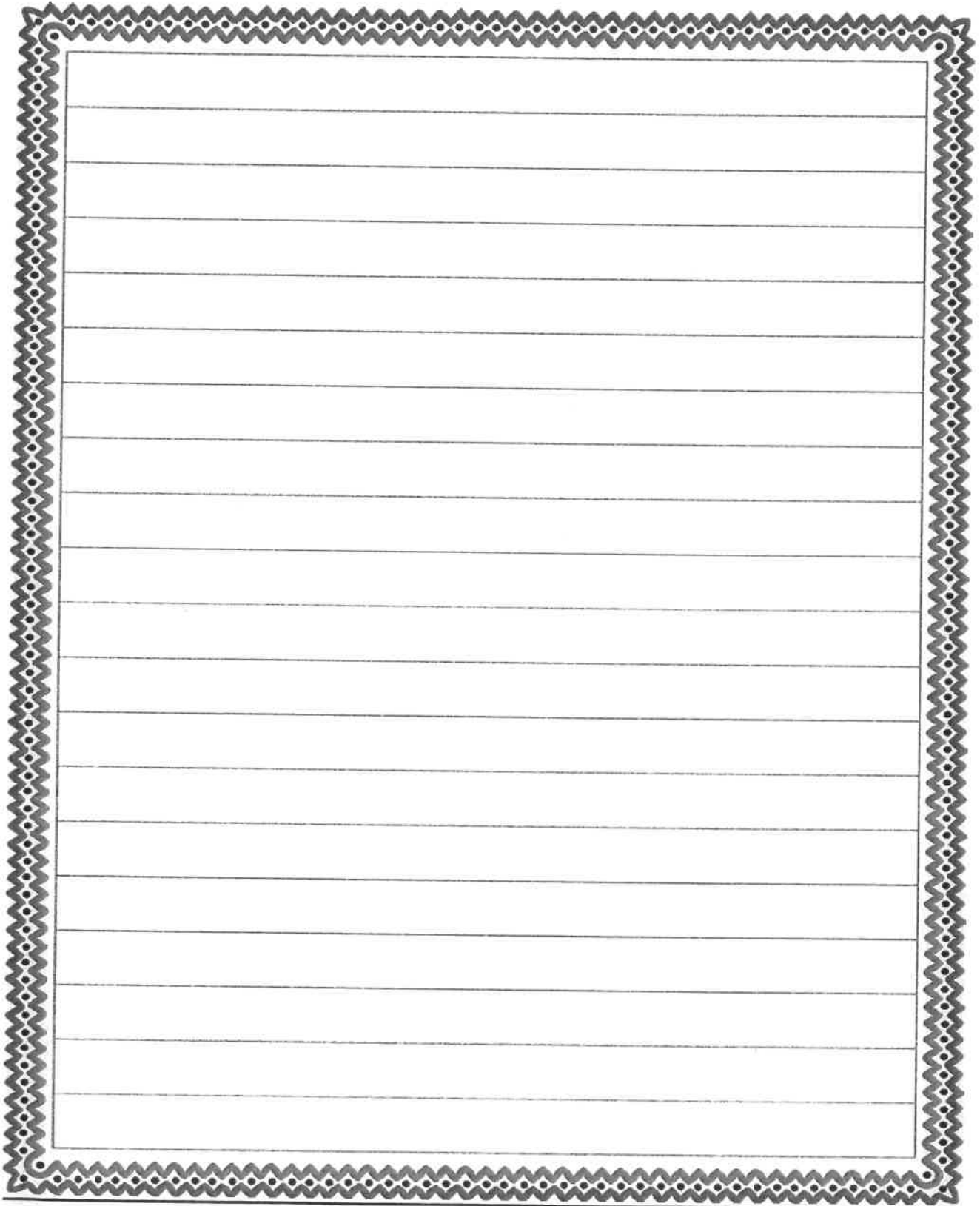
She's undeniably great.  
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## Storyboard


## Story-Writing

- Tell the story of one of the poems.
- Use noun-phrases as you do.
- Make some of these using prepositions.



A large rectangular writing area with a decorative border. The border is composed of a repeating geometric pattern of small squares and dots. Inside the border, there are 20 horizontal lines, creating 21 rows of space for writing. The lines are evenly spaced and extend across the width of the writing area.

